



College AND UNIVERSITY Business

JUNE 1954: Investment Trust Accounting • Centralized Stenographic Bureau • Buying Furniture • Selecting Building Hardware • Proper Painting Techniques • Food Service Equipment Maintenance Program

Architectural and Engineering Firms Light Their New Buildings with Wakefield STARS

For years Sanzenbacher, Morris and Taylor, Toledo architects and engineers, and the Toledo Engineering Company, specializing in glass plants, have worked together on many a project. When one decided to move from crowded downtown quarters to a new home on Toledo's outskirts, the other followed suit. Result: two new modern attractive one-story buildings side by side on the city's edge.

In designing both buildings, Sanzenbacher, Morris and Taylor made certain of one thing; they would rid themselves of the light glare which had plagued the drawing

boards and offices of themselves and their fellow firm in their old quarters. Mr. Elmer Brigham, the architectural firm's electrical engineer, surveyed a variety of luminaires and purchased the Wakefield Star. His studies showed him that the Star put most of the light on the ceiling to be evenly distributed throughout the room; that there was little if any direct or reflected glare; that the resulting low brightness lighting made for almost effortless seeing. The F. W. Wakefield Brass Company, Vermilion, Ohio. In Canada: Wakefield Lighting Limited, London, Ontario.



Drafting Room, Sanzenbacher, Morris & Taylor

LIGHTING INSTALLATION FOR SANZENBACHER, MORRIS & TAYLOR

Drafting Room has continuous fenestration, 6 feet high by 76 feet long, on north side of building. Drafting Room and General Office have acoustical tile ceilings, light colored walls and light colored asphalt tile floors.

Continuous rows of 2-lamp Wakefield STARS, placed on 7'-9" centers and equipped with the 96T12 warm white lamp, were used.

There are thirty-three eight-foot luminaires installed; three rows (2 circuits per row) in the Drafting Room, and two rows in the General Office. Fifty to fifty-five footcandles are being maintained.



General Office, Toledo Engineering Company

LIGHTING INSTALLATION FOR TOLEDO ENGINEERING CO.

General and Private Offices and Engineering Department have acoustical tile ceiling, light colored walls and drapes, light colored asphalt tile floor.

Continuous rows of 2-lamp Wakefield STARS, placed on 7'-0" centers, and equipped with the 96T12 warm white lamp, were used.

There are fifty-two eight-foot luminaires installed which are wired on eight circuits. Sixty footcandles are being maintained in the General Office area.

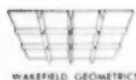


General Office, Sanzenbacher, Morris & Taylor



Private Office, Toledo Engineering Company

Wakefield Over-ALL Lighting



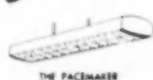
WAKEFIELD GEOMETRICS



THE CAVALIER



THE GRENADE



THE PACEMAKER



THE COMMODORE



THE STAR



THE WAKEFIELD CEILING





FOR YOUR STUDENTS...

Greater bathing satisfaction

Students look forward to shower bathing to banish fatigue from work or play and restore the feeling of fitness. But just any shower isn't good enough. The truly satisfying bath is delivered by a SLOAN Act-O-Matic SHOWER HEAD—a greatly improved cone-within-cone spray that is evenly distributed and undistorted. It is directed as desired and the volume is fingertip controlled. The Act-O-Matic provides the shower bathing satisfaction your students deserve. And it has many advantages for management.

FOR YOU...

Maximum freedom from complaints • servicing • waste

In this entirely different shower head you get all of these very important advantages:

- 1 **Automatically Self-Cleaning**—Patented automatic action thoroughly flushes the interior of shower head each time it's used.
- 2 **No Clogging**—All clogging particles are automatically and completely discharged.
- 3 **Maintenance Eliminated**—Because this shower head is always free from clogging and other faults it requires no servicing.
- 4 **Water Economy**—Exclusive design provides efficient, enjoyable bathing with big water savings.
- 5 **Fuel Savings**—It costs money to heat and pump water, thus water economy means saving costly fuel.
- 6 **Easily, Quickly Installed**—Equipped with connector that fits all standard shower arms, old or new.
- 7 **Vandal-Proof Model**—To prevent tampering or theft, a vandal-proof model is available at slight additional cost.

The
SLOAN
Act-O-Matic
SHOWER HEAD
•
**AUTOMATICALLY
SELF-CLEANING**
each time it's used

SLOAN VALVE COMPANY

4348 West Lake St., Chicago 24, Ill.

Please send me full information on the Act-O-Matic Shower Head.

NAME, TITLE _____

NAME OF HOTEL _____

STREET ADDRESS _____

CITY, ZONE, STATE _____

POWERS

First with duo-seal PACKLESS CONTROL VALVES



**DURABLE
AIRTIGHT
CONSTRUCTION**

More ACCURATE Control with Powers PACKLESS Valves

Minimum valve stem friction. No packing nut or gland to be tightened, oiled or adjusted. No binding of valve stem as with conventional packing. Powers duo-seal construction assures better performance and—

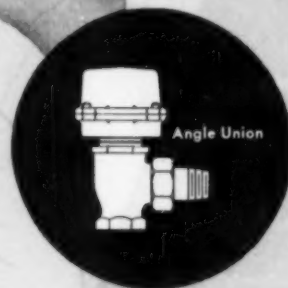
**No Packing Maintenance. No Leakage
of Water or Steam. No Loss of Vacuum.**

To insure getting a temperature control system with the best control valves made for convectors, unit air conditioners, unit ventilators, radiators, panel heating and cooling coils—specify or install POWERS pneumatic control.

GOOD CONTROL VALVES ARE IMPORTANT

On many heating and air conditioning systems, valves outnumber thermostats 1½ to 3 times.

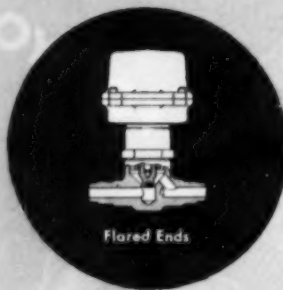
Available in
Various Types
and Sizes



Angle Union



Screwed Ends

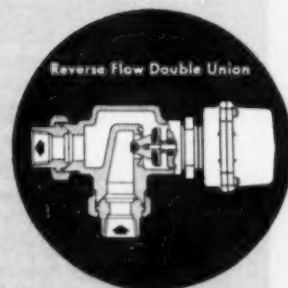


Flared Ends



Rugged Cast Aluminum Top

- A) Durable Molded Diaphragm
- B) Bronze Bellows, Primary Seal
- C) "O" Ring, Secondary Seal
- D) Polished Stainless Steel Valve Stem
- E) Characterized Throttling Nut



Reverse Flow Double Union

College AND UNIVERSITY Business



EDITORIAL DIRECTOR
ROBERT M. CUNNINGHAM Jr.

EDITOR
HAROLD W. HERMAN

ASSISTANT EDITORS
MILDRED WHITCOMB
BEULAH H. TORSET

PUBLISHING DIRECTOR
J. W. CANNON Jr.

DIRECTOR MARKET RESEARCH
RUSSELL T. SANFORD

PRODUCTION MANAGER
LEO KEDROK

PUBLISHING AND
EDITORIAL OFFICES
919 N. MICHIGAN AVE.
CHICAGO 11, ILL.
SU perior 7-6402

EASTERN OFFICE
101 PARK AVE.
NEW YORK 17, N.Y.
MU rray Hill 3-2445

CLEVELAND OFFICE
(Adv. Sales only)
1501 EUCLID AVE.
CLEVELAND 15, OHIO
SU perior 1-2452

WESTERN STATES
REPRESENTATIVE
(Adv. Sales only)
McDONALD-THOMPSON
LOS ANGELES, SAN FRANCISCO
SEATTLE, PORTLAND
DALLAS, DENVER

Published monthly by The Nation's Schools Division, The Modern Hospital Publishing Co., Inc., 919 North Michigan, Chicago 11, Ill., U.S.A. Raymond P. Sloan, president; Stanley R. Clague, vice president and secretary; Everett W. Jones, vice president; Peter Ball, vice president; John P. McDermott, treasurer. Copyright 1954, by The Nation's Schools Division, The Modern Hospital Publishing Co., Inc. Single copies, 50 cents. Acceptance under Section 34.64, P.L.&R., authorized. Published on the tenth of the month of the date of issue. Change of address should be sent 30 days in advance of publication date.

Vol. 16, No. 6, June 1954

JUNE 1954

FEATURE ARTICLES

What Should Be Our Relationship to Defense Mobilization Problems?....	17
ARTHUR S. FLEMING	
Business Has a Duty Toward Public Causes	19
RICHARD K. MELLON	
Applying Investment Trust Accounting to Consolidated Endowment Funds	21
ROBERT D. FUNKHOUSER	
Start Early to Select the Hardware for That New Building	24
NORBORNE S. ENNES	
What to Look for in Buying Furniture	27
J. R. WAIT	
Applying Specialized Knowledge to the Selection of Paint	30
DAVID J. WATSON	
Should We Let Them Paint Their Own Rooms?	34
CARL M. LEHMAN	
The Need for Guidance Workers in College Residence Halls	36
JOHN W. KIDD	
Three Purposes Served in Design of This Physical Education Building	38
NORMAN P. AUBURN	
From Self-Service to Clerk Control, Matter of Minutes in Book Exchange	41
SHIRLEY LYKINS	
Centralized Stenographic Bureau	44
BETTY MILLER	
Charitable Bequests Should Be Drafted With Care	48
T. E. BLACKWELL	
Setting Up a Maintenance Plan for Food Service Equipment	49
ROBERT TELDER	
Food Service Institute Program	50

AMONG THE AUTHORS	4
QUESTIONS AND ANSWERS	6
LOOKING FORWARD	18
NEWS OF THE MONTH	52
NAMES IN THE NEWS	68
DIRECTORY OF ASSOCIATIONS	76
CLASSIFIED ADVERTISING	78
WHAT'S NEW	81
VOLUME INDEX	Op. Page 86

EDITORIAL BOARD

GENERAL ADMINISTRATION

RAY KETTLER.....*Purdue University*
GEORGE BAUGHMAN.....*University of Florida*
R. C. MAGRATH.....*University of New Hampshire*

FINANCE AND ACCOUNTING

CLARENCE SCHEPS.....*Tulane University*
EARLE WASHBURN.....*New York University*

PERSONNEL AND OFFICE MANAGEMENT

LYMAN FLOOK.....*University of Chicago*
H. R. PATTON.....*Carnegie Institute of Technology*
CHARLES W. HOFF.....*University of Omaha*

PURCHASING AND STORES

D. FRANCIS FINN.....*Brown University*
D. R. KIMREY.....*University of Oklahoma*
K. A. JACOBSON.....*California Institute of Tech.*

DESIGN AND CONSTRUCTION

PHILIP KEENE.....*Washington State College*
WINSTON CLOSE.....*University of Minnesota*

PLANT OPERATION AND MAINTENANCE

WALTER KRAFT.....*University of Oklahoma*
JOHN KREINHEDER.....*Wellesley College*
PAUL ELLEMAN.....*Ohio State College*

FEEDING AND HOUSING

EMERY FOSTER.....*Michigan State College*
T. W. MINAH.....*Duke University*
LOUISE CHENAULT.....*University of Arkansas*

AUXILIARY ENTERPRISES AND RELATED ACTIVITIES

KURT HERTZFELD.....*University of Rochester*
CARROLL RIKERT JR.....*Middlebury College*

STUDENT ENTERPRISES AND SERVICES

VERN KRETSCHMER.....*University of Illinois*
LUTHER FOSTER.....*Tuskegee Institute*
WILLIAM WELLS.....*University of Maine*

LEGAL PROBLEMS

T. E. BLACKWELL.....*Washington University*

EDITORIAL CONSULTANTS

G. C. HENRICKSEN.....*Duke University*
FRANK PETERSON.....*University of Kentucky*
SAM BREWSTER.....*Alabama Polytechnic Institute*
HILDA WATSON.....*City College of San Francisco*
HENRY HERZOG.....*George Washington University*
ALF BRANDIN.....*Stanford University*
J. LEO SULLIVAN, S.J.....*College of Holy Cross*
LAURENCE LUNDEN.....*University of Minnesota*

Among the Authors

RICHARD K. MELLON, chairman of the board of Mellon National Bank and Trust Company of Pittsburgh, presents his views in regard to management's responsibility to the community on page 19. The manuscript is a condensation of a speech made by Mr. Mellon on the occasion of his receiving the fourth annual Gold Medal of Merit of the alumni society of the University of Pennsylvania's Wharton School of Finance and Commerce. Mr. Mellon was cited for "distinguished leadership and inspired performance in American industry and for his personal contribution to the progress of American business."



David J. Watson

DAVID J. WATSON, superintendent of buildings and grounds at Clemson College, Clemson, S.C., beginning on page 30 discusses some of the principles of paint and painting, which constitute a major maintenance factor in a college or university. Mr. Watson is now completing his 25th year as superintendent of buildings and grounds at his alma mater. He manages a large and efficient utilities and maintenance crew, and the practical side of building repair and upkeep on a far-flung campus greatly interests him. Paint he considers the No. 1 preserver and beautifier and, accordingly, has made an intensive study of the subject by consulting with paint chemists, by visiting paint production plants, and by experimenting at great length with various paint finishes.



John W. Kidd

DR. JOHN W. KIDD, assistant professor at Michigan State College and resident adviser for the men's residence halls system, states on page 36 what he feels are basic principles to be observed in student counseling work. He has devoted his entire career to the field of education—as a teacher in Louisiana schools, as a member of the faculty at Louisiana State University, and more recently as a staff member of Michigan State College. Active in professional organizations, Dr. Kidd is a member of Phi Delta Kappa, Pi Gamma Mu, National Council for the Social Studies, American Academy of Political and Social Science, the National Education Association, and Delta Kappa Epsilon.

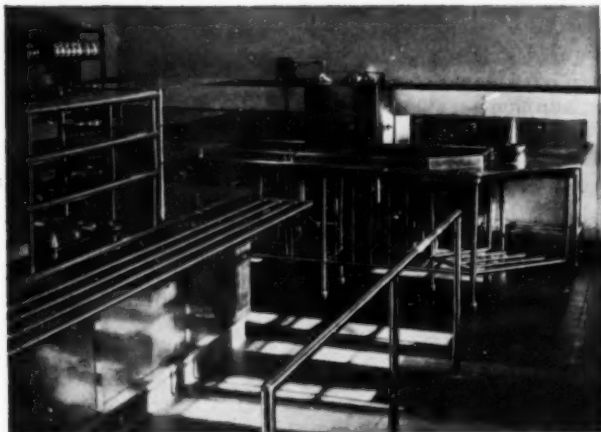
NORMAN P. AUBURN, president of the University of Akron, describes on page 22 the problems involved in placing a new physical education building in the midst of a built-up urban community. The difficulties encountered in the construction of such a facility and the solutions made will be of particular interest to those facing similar site limitations. Before becoming president of the University of Akron, Dr. Auburn had served at the University of Cincinnati as vice president and dean of university administration for many years. He has written extensively for educational journals, and his professional hobby is research in the financing of higher education. He has exercised other talents as editor of trade journals and college alumni magazines, and formerly was a member of the board of trustees of the Cincinnati public library.

BETTY E. MILLER, manager of the stenographic bureau at the University of Omaha, describes on page 44 the procedures followed in coordinating the stenographic facilities of the institution with the mechanical work of duplicating services and a stenographic pool. Mrs. Miller has been working in her present capacity for the last four years, prior to which time she was for a short period an assistant in the board of examiners office at Michigan State College.

IDEAS

from PROMINENT FOOD SERVICE INSTALLATIONS

Famous Phillips-Exeter Academy features Blickman-Built equipment with novel heated serving shelves



STAINLESS STEEL DISH TABLES (against wall) —small compact unit designed for efficient operation. Raised rolled rim prevents spilling of liquids on floor. Note all-welded stainless steel understructure and pear-shaped feet, which are adjustable. Cafeteria counter at left has cantilever brackets supporting plate glass shelves. This construction eliminates obstructions, leaves counter space free and minimizes dish breakage.

STEAM-HEATED SHELVES feature this stainless steel serving counter in Dunbar Hall. Loaded dishes placed on the shelves are kept hot and palatable while awaiting pick-up by waiters. Note the highly-polished, sanitary stainless steel surfaces. In the years to come, they will remain as bright and clean-looking as they do today.



● Phillips-Exeter Academy in Exeter, New Hampshire, renowned New England school, seeks every modern facility for the well-being of its students. The food service installations in Dunbar and Webster Halls reflect that policy. All welded, heavy gauge, stainless steel construction was selected for long service life and perfect sanitation. Every Blickman-Built unit was planned for labor-saving efficiency and for serving appetizing foods. Typical are the steam-heated serving shelves shown below —designed to keep loaded dishes hot and palatable. In terms of durability, sanitation and economical operation — it pays to invest in Blickman-Built food service equipment — the finest made.



SEND FOR ILLUSTRATED FOLDER describing Blickman-Built Food Service Equipment—available in single units or complete installations.

S. BLICKMAN, Inc.

2806 Gregory Avenue, Weehawken, N. J.



Blickman-Built
FOOD SERVICE EQUIPMENT



COFFEE URNS



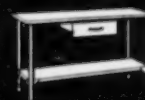
STEAM TABLES



FOOD CONVEYORS



SINKS



WORK TABLES

Questions and Answers

Surveys by Outsiders

Question: What are the advantages and disadvantages of institutional surveys by outside professional agencies?—R.C., Ill.

ANSWER: The advantages of the survey team, if it has considerable background, are:

1. It can evaluate procedures in comparison with good operations elsewhere.

2. Many procedures result from a series of judgments as expansions take place. Some of these have not been examined critically because of pressure of day-to-day operations. An outside survey will spot these readily and recommend improvements.

3. An outside survey usually will expose weaknesses in organization and, by calling them to the attention of top management, will improve operations.

The commonest disadvantage is that recommendations are so voluminous and expensive that adoption is impossible.—NELSON WAHLSTROM, controller, University of Washington.

Excise Tax Exemption

Question: May tax supported institutions legally sign and submit excise tax exemption certificates to transportation companies for tickets which they buy for educational tour students?—B.T., Ind.

ANSWER: The published ruling covering the situation presented relating to the taxability of payments for the transportation of students is cited as Rev. Rul. 299, I.R.B. 1953-26, 51 and is quoted as follows:

"Payments for transportation of students of a school operated by a state, territory of the United States, or political subdivision thereof, or the District of Columbia, which are made by the school from funds collected only from the participating students for the purpose of defraying their individual expenses, constitute payments for transportation furnished to the state, etc., within the meaning of the exemption provided by section 3469(f)(1) of the Internal Revenue Code, since such payments are not

made from funds belonging to the school. Accordingly, such payments are subject to the tax on the transportation of persons. Clarification of M.T. 28, C.B. 1948-2, 176."—FRANK W. HUBBARD, director, research division, National Education Association.

Laboratory Floors

Question: What type of floor would you recommend for the chemistry laboratories where acid may be accidentally spilled from time to time? If there are several types of floors about equally acid resistant which one is the least expensive?—B.J.A., Minn.

ANSWER: I don't know the best floor for a chemistry laboratory because my experience is limited to one type of floor covering. The chemistry laboratories at the Alabama Polytechnic Institute were floored in asphalt tile in 1929 and have been in constant use since. The floors still look well, and little tile has been replaced. The floors are kept waxed and spilled acid is not allowed to remain on the floor. Fumes and normal use do not appear to bother the tile. The darker colors, which are the least expensive, are just as good as the lighter tile so far as wear is concerned. Asphalt tile floors are as inexpensive as any good floor covering that I know of.—SAM F. BREWSTER, director, department of buildings and grounds, Alabama Polytechnic Institute, Auburn, Ala.

If you have a question on business or departmental administration that you would like to have answered, send your query to COLLEGE and UNIVERSITY BUSINESS, 919 North Michigan Avenue, Chicago 11, Ill. Questions will be forwarded to leaders in appropriate college and university fields for authoritative replies. Answers will be published in forthcoming issues. No answers will be handled through correspondence.

Loss of Silverware

Question: Is there any practical way to reduce loss of silverware because of theft by customers?—E.M., Ill.

ANSWER: Not to my knowledge. In my experience in running college food service facilities, extending over a period of 18 years, I have never been able to prevent or to reduce loss of silverware because of theft by student customers. None of them think of it as thievery; in most cases they like to feel that they are just borrowing the silverware for use in their rooms.

We have a standing agreement with the buildings and grounds department to collect all glassware and silverware found in the students' rooms during vacations and return it to the dining rooms. However, in spite of this, we lose each year more than \$6000 in dining room utensils. Our deans have been cooperative, even to the point of bringing the matter up before student government, but with no success.

In my opinion, it is safe to assume that little can be done in the way of changing the habits of students. Therefore, I believe we should be realistic and, instead of antagonizing our customers, just let them pay for the items without realizing it. Each year I anticipate a \$6000 loss and recover this amount of money by "hidden" tax on milk or butter or some other item on the cafeteria line which I believe is popular enough to carry it.

We render a service to student groups who wish to take out food and materials for picnics and cabin parties, but a system has been set up so that they pay a deposit large enough to cover any loss. This deposit is refunded when the equipment is returned. We have had only two forfeits of deposits in the last eight years.

Most college bookstores have on sale for purchase by students sets of monogrammed glasses and silverware, but bookstore operators do not claim that sales of this kind are brisk.—THEODORE W. MINAH, director of dining halls, Duke University.

...AT THE UNIVERSITY OF ROCHESTER

Dormitory Furniture by

Carrom



The University of Rochester uses Carrom Furniture. So do many other colleges and universities.

The reason why is simple but factual. Carrom Wood Furniture provides a friendly, comfortable warmth that helps make a dormitory more like home. And Carrom Wood Furniture is designed and constructed to stand abuse—to last for many years.

Look into Carrom Furniture now—see our complete line, traditional or modern, standard or special.

CARROM INDUSTRIES, INC.

Ludington, Michigan

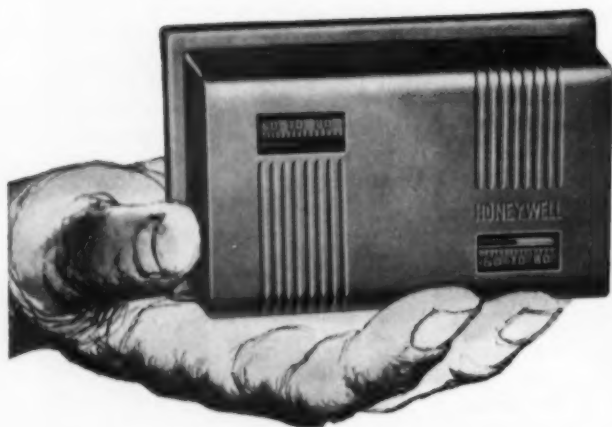


Write today for
our complete catalog

10:00 A.M.



Stifle his alertness...and his



*A Honeywell Thermostat
is best because . . .*

- Modern design and engineering skill make it more sensitive and more accurate.
- Red thermometer indicator permits easy temperature settings and easy reading.
- Vital parts are protected from breakage, dirt, or tampering.
- Simplified working parts assure trouble-free service for years.

1:30 P.M.

learning will suffer!

*Keep your students bright and alert all day—
with a Honeywell Thermostat in each classroom*

If your classrooms are too hot and stuffy . . . if your students have to *fight* to stay alert—learning will certainly suffer!

One critical time is immediately after lunch. Students just won't stay alert in a *stuffy* classroom or study hall after a good lunch and an active lunch period.

But with a Honeywell Thermostat in each classroom, you can accurately coordinate level tempera-

tures, adequate fresh air and proper humidity to create ideal conditions for better learning.

For example, you can set the thermostat to supply less heat and more fresh air during the loby periods, study periods, tests or increased classroom activity.

With one of these modern Honeywell Thermostats in each classroom, you can be sure *they'll stay alert*—their afternoon reactions will be as bright and vibrant as those at 10:00 a. m.



Write for complete information on Honeywell School Controls. Just address Honeywell, Dept. CB-6-113 Minneapolis 8, Minnesota.

112 OFFICES ACROSS
THE NATION



MINNEAPOLIS
Honeywell

First in Controls

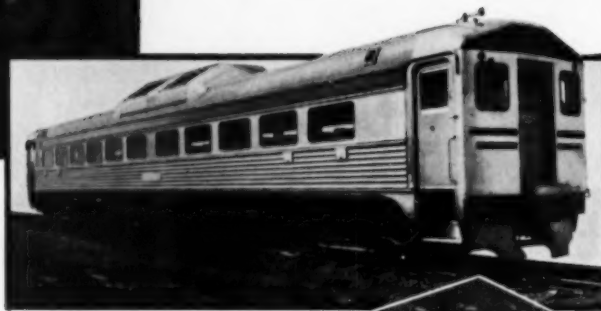
Selected for maximum wear with minimum care



Heavy traffic in this Budd Company R.D.C. diesel-powered passenger car has little effect on the durable J-M Terraflex floor. A damp-mopping whenever necessary, will restore it to its first-day color beauty.

Johns-Manville **TERRAFLEX** Vinyl Floor Tile

... in Budd Company
R.D.C. all-stainless
steel passenger cars



J-M Terraflex® needs less care and gives more wear than any other type of resilient floor of equal thickness . . . pays for itself through years of low-cost maintenance

As a result of its tested performance in railroad car installations, Johns-Manville Terraflex Vinyl Floor Tile is standard equipment in the Budd Company's new R.D.C. passenger cars.

J-M Terraflex is a flooring of time-proved superiority. Made of vinyl and asbestos it is exceptionally tough and resistant to traffic . . . defies grease, oil, strong soaps and mild acids.

Terraflex saves time and dollars through low-cost maintenance. Its nonporous surface requires no hard scrubbing . . . damp-mopping keeps it clean and bright . . . frequent waxing is eliminated. Through years of economical service Terraflex pays for itself.

Available in a large range of striking colors, Terraflex is ideal for restaurants, public areas, schools, hospitals.

Specify J-M Terraflex whenever your plans call for resilient flooring. Its long-wearing beauty and long-time economy provide a maximum of reliable floor service. For complete information write Johns-Manville, Box 158, New York 16, N. Y.

Johns-Manville





This is Wayne visibility . . .



This isn't

GOOD VISIBILITY? DON'T TAKE IT FOR GRANTED!

It seems to us that buyers of gymnasium seating for balconies always compare the quality of the materials, the understructure, operating mechanism . . . in fact, all the construction features but often overlook the most important one . . . *good visibility*.

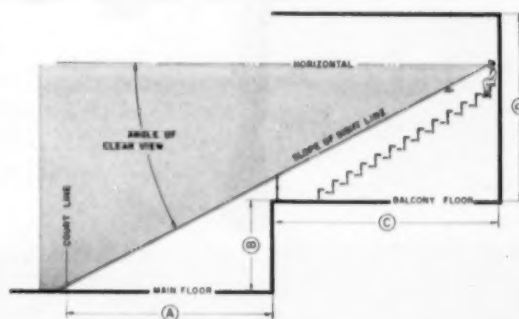
Without good visibility, your investment in balcony gymnasium seating is worthless.

Among the important factors determining good visibility in gymnasium seating for balconies is the rise per row (the vertical distance between successive seat boards). In Wayne construction there is a *special rise per row* to accommodate those situations where the height of the seat boards can increase visibility.

At the planning stage, our engineers make a sight-line-study of your gymnasium balcony, and from this determine the rise per row that will assure maximum visibility for your spectators.

LET WAYNE MAKE A "SIGHT-LINE-STUDY" OF YOUR GYMNASIUM BALCONY

As a free service . . . at your request . . . Wayne Engineers will gladly make a sight-line-study of your gymnasium balcony to determine the correct number of rows and the best rise per row for your stands. Please write direct to Dept. C-6 . . . there's no obligation of course.



WAYNE

WAYNE IRON WORKS

146 N. PEMBROKE AVENUE, WAYNE, PA.

WAYNE STANDS



FOR SAFETY

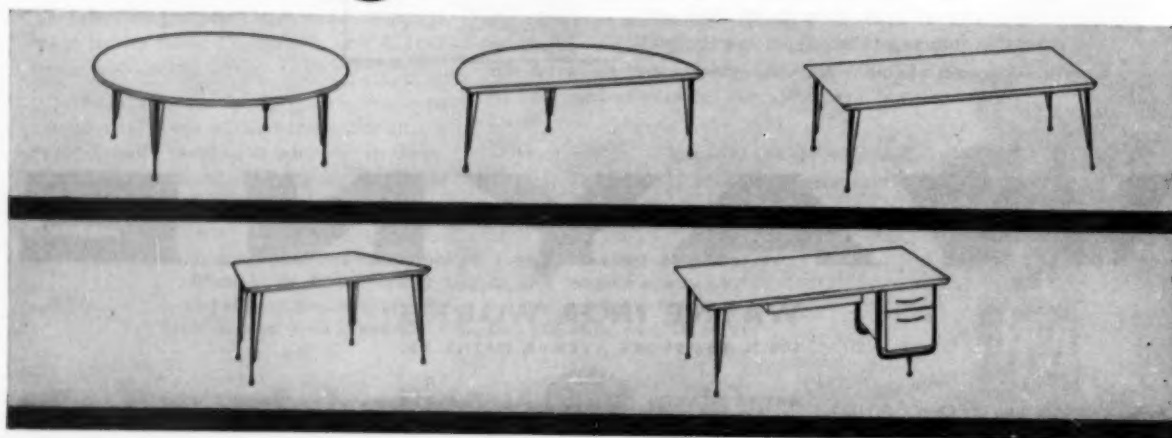


Brunswick

School

Furniture

Available in



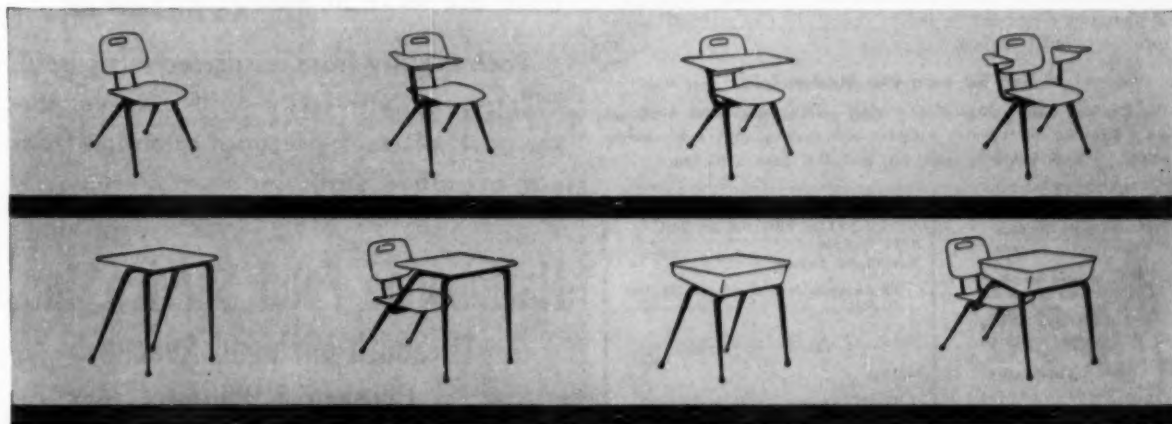
Today you can buy . . . in *quantity* . . . Brunswick School Furniture
to meet your needs. Here is furniture advanced in design and
engineering, incredibly flexible in use. The entire line is keyed
to today's teaching methods, complements any classroom.
Hundreds of schools across the country have installed Brunswick
during the past year. The list is growing daily. Now is the time
to make your move to Brunswick—the furniture that meets
the requirements of your school today *and* tomorrow.

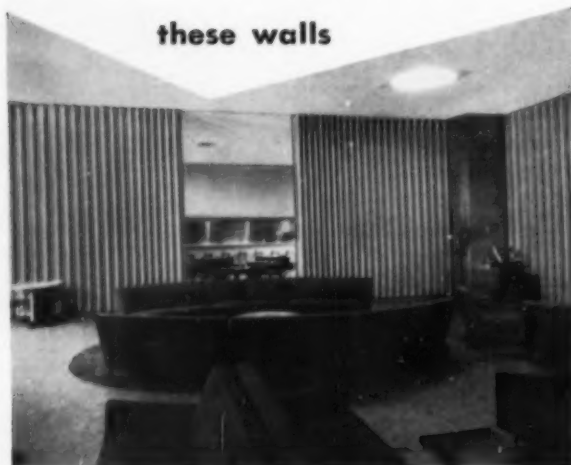
THE BRUNSWICK-BALKE-COLLENDER COMPANY
623 South Wabash Avenue • Chicago 5, Illinois

Brunswick

quantity

For your catalog, write to The Brunswick-Balke-Collender Company, 623 South Wabash Avenue, Chicago, Illinois. There is a Brunswick branch or dealer near you.





these walls



go into hiding

MODERNFOLD doors

With Modernfold doors, this student lounge can handle up to three separate activities . . . easily. Yet when the time comes to make it an all-purpose area again, the room divisions literally disappear! Recessed pockets hold the Modernfold doors completely hidden — yet instantly available. Just one example of the way schools and colleges are using Modernfold for more efficient, more attractive space management — and cutting remodeling and construction costs.

You'll want to find out more about Modernfold. See your Modernfold distributor — under "doors" in city classified directories — or mail coupon.

but be sure it's Modernfold

The first and best folding door • Vinyl covering over steel • 38 colors • Sizes for any opening • Cleans with a damp cloth • No cornice above, no track below to catch dust and dirt. Lasts a lifetime.

NEW CASTLE PRODUCTS, Inc.
New Castle, Indiana;
Montreal 6, Canada



by NEW CASTLE
COPYRIGHTED NEW CASTLE
PRODUCTS, INC., 1954

NEW CASTLE PRODUCTS, INC.
P. O. Box 802
New Castle, Indiana

☐ Please send full details on Modernfold doors.

Name.....

Address.....

City..... County..... State.....

NURITURE



COLLEGE SPECIALIST

NATIONWIDE FOOD SERVICE INC.
18 S. MICHIGAN AVE. CHICAGO 3 ILL. ANdover 3-0555

Nationwide Food Service, Inc., offers personalized consultation available to you in your office.

Food service problems of the college campus are given individual counsel by an expert in each category of endeavour. Cost Analysts, Chefs, Engineers, Merchandising Experts, Personnel Tutors combine highly skilled individual abilities to produce the BEST in FOOD SERVICE.

Each inquiry from an accredited school, college, or university will receive immediate, discreet, personal attention from our executive staff.

Nationwide Food Service, Inc.
18 South Michigan Avenue
Chicago 3, Illinois

COLLEGE and UNIVERSITY BUSINESS

SUCTIONEERED!



CLARKE WD-23
WET-DRY VACUUM CLEANER

Clarke

Authorized Sales Representatives and Service Branches
in All Principal Cities

CLARKE SANDING MACHINE COMPANY

246 E. Clay Avenue

Ann Arbor, Michigan

HOW

TO CLEAN faster, better, at lower cost is a major maintenance problem today. To solve this problem, Clarke "Suctioneered" a complete line of wet-dry vacuum cleaners to reduce physical effort up to 80% over old-fashioned methods, cut cleaning time drastically, and lower cleaning costs.

WHAT

IS "SUCTIONEERED"? Each Clarke wet-dry vacuum model is "Suctioneered"—skillfully engineered and built from the ground up for powerful suction, years of heavy-duty service with a complete line of attachments to do specific cleaning jobs faster, better. Clarke wet-dry vacuums make quick work of cleaning rugs, carpeting, walls, drapes, furniture, overhead fixtures, boilers. When used in combination with famous Clarke Floor Maintainers that scrub, wax, steel wool and polish floors, Clarke wet-dry vacuums complete a team to speed each floor cleaning job, wet or dry.

WHY

CLARKE is the choice of cost-conscious maintenance men throughout the nation should be a major factor in *your* selection of wet-dry vacuum equipment. The completeness of the Clarke line insures you the right model for *your* cleaning job.

NOW

IS THE TIME to learn the complete Clarke story — before you buy any wet-dry vacuum. Mail this coupon today.

Send me FREE, colorful literature that will tell me how to lower maintenance costs, improve each cleaning job. Also tell me about Clarke Floor Maintainers.

Name _____

Firm _____

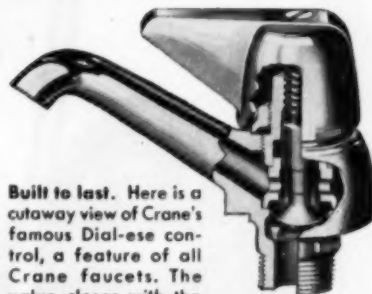
Street _____

City _____

State _____

Why it pays to specify CRANE for your new building plans

The most used (and often most abused) rooms in any college buildings are the washrooms. And that's an important reason to include Crane plumbing in your new building plans. For Crane's reputation in plumbing has been built on quality—the kind of quality that withstands hard knocks and that cuts down on costly maintenance. Crane leads too, in styling and breadth of line to fit any floor plan, and in prices to suit any budget.



Built to last. Here is a cutaway view of Crane's famous Dial-ese control, a feature of all Crane faucets. The valve closes with the water pressure instead of against it, so the water itself helps hold the valve shut and prevents wasteful dripping. All wearing parts are inside a replaceable cartridge, so maintenance is easy.



One way to increase efficiency without increasing cost

Saving steps and time for students and teachers is, naturally, an important function of building facilities. And an easy way to do this without adding to cost is the proper placement of washbasins.

Instead of having many washbasins in every corridor washroom, ask your architect to study

the benefits of placing some of them in art rooms, laboratories, and other strategic locations. And when you do, let him know your choice of Crane . . . the preferred plumbing.

CRANE CO.

GENERAL OFFICES: 836 SOUTH MICHIGAN AVE., CHICAGO 5
VALVES...FITTINGS...PIPE...PLUMBING AND HEATING

What Should Be Our Relationship to Defense Mobilization Problems?

ARTHUR S. FLEMMING

Director, Office of Defense Mobilization



FOR MORE THAN 175 YEARS OUR ECONOMY HAS expanded, spearheaded by the development of new technology in the professional and scientific fields. That expansion is providing the essential base for our defense mobilization program and for economic stability and strength not only at home but throughout the free world.

Yet, if we are to have national security our economy must continue to grow. And it must be paralleled by the development to full extent of the professional, scientific and technical skills of today's generation.

The challenge that confronts industry today is that of improving its technology to meet the demands of the civilian economy and the needs of the military. At the same time, defense planners are wrestling with the problem that in an emergency our resources of highly trained men and women may be the ultimate limiting factor in our capacity for mobilization.

The problems in both areas add up to one thing: Both our economic growth and our national security depend upon an adequate supply of highly trained men and women, including engineers and scientists. That is why defense mobilization planning is dependent to a greater degree than ever before upon educators in the fields of higher learning. But now that it is obvious that we are to live with a defense mobilization program for an indefinite period of time there are certain other things that our educational institutions can do to help our nation emerge from this age of peril with its foundations strengthened rather than weakened.

Even greater effort must be made to provide our young men with the facts, figures and reasoning that make it necessary, with few exceptions, for them to be called for a period of service in the armed forces. By being so informed they will not regard it as an imposition when they are called upon to serve following, for example, the completion of their undergraduate or graduate programs. Instead, they will recognize that completion of their educational programs prior to service in the armed forces is a privilege that has been extended to them in the belief that it will enable them to make a more significant contribution to the nation, both in and out of the armed forces, than would otherwise be the case.

On the other hand, it is equally the obligation of the federal government to provide facts and figures. This it can do. Recently the Office of Defense Mobilization prepared a special report for the President on the over-all manpower situation. The report, now available to the public, contains basic information that can be extremely useful to educational institutions both in their planning and in explaining the reasoning behind the concept of universal obligation to serve in the armed forces.

Institutions of higher education should utilize every avenue of communication to provide young men and women having the appropriate abilities with accurate and up-to-date information relative to the nation's needs for scientists and engineers. We underline these needs when we are confronted with an emergency. We tend to forget about them after the emergency has eased somewhat. As a result, the next emergency may find us in an even more serious situation. Available evidence points clearly to the fact that our potential adversary is placing heavy emphasis on educational programs in the sciences and technology. This means that we must be striving always to maintain the lead we now have in these fields.

A great deal more can be done also to establish closer working arrangements between colleges and universities and high schools so that both high school students and the faculty will become aware of the opportunities in the professional and scientific fields.

It is quite safe to say that military needs have the effect of placing research and development under forced draft. The consequence is that both military and civilian technology move forward at an accelerating rate. This means that requirements for scientists and engineers are going to increase more rapidly than if the world situation were more stable and research and development geared to the normal needs of our economic and social life. But with that research and development we are going to usher in a new age of technology for peaceful and constructive purposes. This, in turn, is going to create a constantly increasing demand for men and women skilled in the fields of human relations and equipped for that type of leadership that will result in a structure for a peaceful world being created on a strong spiritual foundation.

Looking Forward

Foundation Giving

WITHIN THE LAST THREE OR FOUR YEARS THERE HAS been a swelling upsurge of interest in what corporations and foundations are able to do in regard to philanthropy. Some college administrators have seized upon the idea of corporation giving as a cure-all for their institutions' financial ills. This hope is not realistic, but there is reason to believe that corporations are looking more favorably on the idea of providing gifts and grants to nonprofit organizations and institutions. There has been considerable ignorance as to how foundations and trusts operate, what their functions may be, and the methods followed in making grants to nonprofit institutions.

One of the most specific and helpful aids to a better understanding of foundation processes, objectives and technics is the recent study published by Business Reports, Inc., of Roslyn, N.Y., titled "Tax Planning for Foundations and Charitable Giving."

Part I of this study is directed at individuals and their advisers. It shows why a family foundation may be the most effective way to keep an estate intact and explains what objectives can be given the foundation, so that both charity and personal needs are effectively served. It describes how to organize the foundation, how to win Washington clearance, and how to keep the foundation tax exempt.

Part II is directed at corporations facing the growing problem of charitable contributions and analyzes legal pitfalls. It discusses the questions of how much to give, how to allocate donations, how to make certain the firm is getting its money's worth, how to administer a sound program.

College executives will be particularly interested in Part III, which suggests how to sell a donor on making a gift and how to tailor the method of giving to the needs and interests of the donor. Suggestions also are included as to how to solicit—the pros and cons of approach by mail, personal contact, or use of professional fund raisers.

The generalities evident in most literature on foundation giving seem to have been avoided in this study on "Tax Planning for Foundations and Charitable Giving." Material available for the readers' perusal is concise and well documented, and the study should serve as a working tool for the institutional administrator concerned with soliciting gifts from foundations and corporations.

In a different vein, but on the same subject, is a new book recently released by the Russell Sage Foundation titled "Operating Principles of the Larger Foundations" by Joseph C. Kiger. Much of the material included in this book was submitted by the foundations themselves in testimony presented before the hearings in 1952 of the select (Cox) committee to investigate foundations. Dr. Kiger, director of research for the committee, is a staff associate of the American Council on Education.

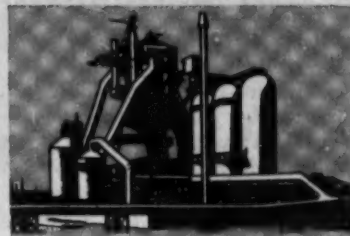
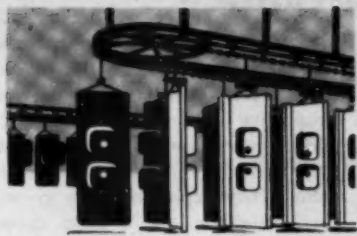
The study attempts to answer why foundations were created, interprets their present rôle, and suggests what may be expected as to their future. This historical review of large foundations and their operating principles merits a place on the college administrator's bookshelf.

College administrators will have to do their own research as to their institutions' needs and ways of soliciting support. Careful study and reading of data such as reported here should do much to expedite the fund development program and to reduce the number of errors that is likely to occur in such planning.

Costly Competition

WITHIN RECENT YEARS THE TREMENDOUS BUILDING program on many a college campus may have created more problems than it has solved. In some cases, harmful competitive relationships have developed between certain segments of the university family.

One of the critical points of tension is that which is developing in some areas between those responsible for operation of the residence halls and those charged with management of the college union program and building. On some occasions, top management has authorized the construction of elaborate residence hall structures which have included many of the features found previously only in the college union building program. It is pure folly to expect a union director to program, staff and finance a union building from which a substantial portion of its constituency has been removed and allocated to a residence hall that has a snack bar, recreation rooms, and other income producing facilities. If top administration is prepared to accept a lower income from the college union in regard to its income producing facilities, all well and good. To expect the opposite may indicate that top administration has lost touch with reality in its establishment of income producing facilities that are in close proximity to each other.



A CHANGE IS TAKING PLACE IN THE businessman's conception of his place in the community. In developing this change I do not distinguish between the businessman and the corporation of which he is one of the managers, because the corporation is the legal entity in which this world of his work-a-day activities centers.

A close parallel may be drawn from an historical review of the ethical progress and development of the individual and the corporation. The individual has proceeded from an insistence upon personal rights to an understanding that duties were inherent in those rights, and then to the intelligent performance of those duties. And so the corporation is proceeding from the stage of living within legal rights and powers to a new stage of recognition of corporate responsibilities and duties to the society from which those rights are received.

At one time this concept of duty to society was certainly at a low ebb. Business and the businessman could and did live pretty much to themselves. The businessman's responsibility seemed to be to himself and his associates. His sole interest was to make money, and about the only audience he addressed was his own stockholders.

But with our industrial development came a gradual enlargement of this narrow field of responsibility to embrace the wider field of duties to employees and to customers. Today we see a widening of this world of activity from these three groups to a fourth all-pervasive group—the duty to the public interests. Much of this forward looking concept reflects a change from former days in the type of men who are, or are about to become, top managers of today's industry. Increasingly are future executives being trained in schools of business administration.

To the responsibility for production, top industrial leadership is raising its sights to include a feeling of responsi-

bility for social and political problems of our modern industrialized society. If this development is not universal in all industry, at least the trend toward enlarged responsibilities is clear and definite. Thus, management today represents more than the single interest of ownership of its early history. Management today is attempting to maintain a proper sense of balance in an expanded interlocking group—the stockholders, employees, customers, plus the general public.

To refer to "public interest" may be a more modern way of saying that the businessman has an unavoidable duty toward the entire environment in which he lives, moves and has his being.

Let us examine three areas of the environment in which businessmen work today: (1) the area of government and public policy; (2) the area that embraces the physical characteristics of the community; (3) the area of educational, health, cultural and social needs of the community—to use an all-inclusive phrase: general welfare.

I should like first to discuss the area of government and government policy. Government is the administrative regulation of men, or at least

certain of the affairs of men. Fundamentally, the political problem would appear a problem of human character. Many, many centuries ago a great statesman said: "Governments vary as the dispositions of men vary. States are made not out of rocks or trees but from the dispositions of their citizens which turn the scale and draw everything in their own direction."

Businessmen must participate in the formation of public policy even though the particular issues may not have an immediate influence upon their individual businesses. This necessitates unselfish leadership and personal participation. However important the daily conduct of their business is to them, however demanding upon their time and energy, it is clear that they cannot isolate themselves from the universal public service demands and the social problems that surround them. They cannot get away from the obvious fact that the very basis of our industrial society rests upon the environment in which we live, a society of free men in which the individual has the right to progress according to his ability. After all, performing is better than defending when it comes to selling "free enterprise." The businessman must carry his full share of promoting free

Business Has a Duty Toward Public Causes

RICHARD K. MELLON

Chairman of the Board

Mellon National Bank and Trust Company, Pittsburgh

enterprise, the only climate in which our high state of industrialism can exist, based as it is on individual initiative and the pioneering spirit.

Let us, for example, consider briefly the need for greater interest on the part of the businessman in one public field, that of public schools. Our public school system is a dynamic organization of one million school teachers teaching 25 million youngsters, graduating each year one million high school pupils, of whom about 500,000 enter college. That is why it is essential that businessmen in their respective communities should assume an active interest in public education.

Let us turn briefly to the problem of financial assistance to community causes—community welfare, higher education, social services—yes, and cultural activities. These have historically been considered areas for the leadership of the enlightened and generous private citizen. But with high income, estate and inheritance taxes, individual donors cannot be expected to provide the financial support to the extent that has been possible in the past. Accordingly, the corporation is bid to step into the breach. Now then, can it be done? Can a company donate money to a school without getting a direct return from the donation?

CHANGE IN RECENT YEARS

In the not-so-distant past the legal concept was what our legal advisers termed *ultra vires*, that is, beyond the power of the board of directors as expressed in the company's charter to make gifts for causes or purposes not directly connected with the direct administration of the business. In other words, it was not for the board of directors to decide how the stockholders should dispose of their money. But public opinion and a reexamination of this legalistic approach is breaking down this barrier to giving. Thus, a change in concept has occurred in the past few years.

For example, more than half of our states have enabling laws for charitable contributions by corporations, and more than half of those laws were passed since 1945, which is encouraging, to say nothing of the provisions of our federal income tax laws allowing specified tax exemptions to corporations for philanthropic gifts. The most recent court case I know of was in the New Jersey Superior Court last year in which it was ruled that an unrestricted gift by a corporation to a well

known university, to be used "toward the maintenance of the university," was legal. The New Jersey Supreme Court, to which this decision was appealed, refused to review the case, and so that decision stands. In the words of the New Jersey statute, companies are authorized to make charitable contributions "conducive to the betterment of social and economic conditions."

The fact that during 1953 corporation gifts to various worthy purposes exceeded \$300 million, as against \$30 million in 1936, is evidence of the trend of corporation giving that has taken place in the past few years.

Now what is the present-day stockholder's attitude toward corporate giving? A public opinion survey last year showed that stockholders believe management justified in making contributions from company funds for:

Community Chests	75%
Colleges and Universities ..	74%
Hospitals and Health Organizations	67%
Social Welfare Agencies	49%
Churches and Religion	33%

Much of our industrial progress is due to advancements in science. The basis of this is technical training, and an important beneficiary of such training is American business. The cost of this education is so great today that present low endowment income, gifts from individuals, and tuition payments by students do not cover the costs. Education or any other free enterprise cannot long continue at a loss. Furthermore, is it not reasonable, in fact essential, that corporations pay something toward training such students, many of whom they will later absorb? Already some corporations are providing some financial help, which is merely a good example of enlightened self-interest.

Cannot a similar case be made out for the strictly liberal arts colleges? They, too, are preparing an important percentage of our young men and women for citizenship and the eventual management of enterprise. Here again low endowment incomes and high costs have produced a serious problem. Certainly freedom of education and freedom of enterprise are important ingredients of the kind of life we want continued.

Abraham Lincoln said: "A man cannot be truly happy unless he is doing something for somebody else." Participation by business leadership in community activities provides such a

vehicle for happiness. After all, we come back to people and their individual happiness, and part of their happiness is supplied by the environment under which they live and work. People live in the same communities in which corporations do business, and they and their neighbors work for them. They expect business to be a good neighbor and a good citizen. Good neighbors collectively make a good community in which to live. A livable community must have opportunities for leisure and culture after the work day is done. That is why some cities use tax money to help support various worth-while community activities and forward looking corporations provide financial help for similar objectives.

This newer tendency of modern corporation management to develop a good social sense is complementing the former emphasis on production problems. As evidence of this enlightened attitude, some corporations have recently established charitable foundations to implement the conception of broader responsibilities for financial support to community activities, higher education and the like. This is a good sign, and worthy recognition of the "good neighbor" policy.

NOT WHETHER, BUT HOW

Many organizations have established special departments or other instrumentalities to enter into corporate giving with minimum waste and maximum effectiveness; others have established charitable trusts. The problem is not whether, but how. It is frequently harder to give money away wisely than to make it.

The financial implementation of corporate responsibility to community well-being is by no means a universal movement, nor is it a common and everyday policy in the business world. But, here is represented the considered judgment of the most enlightened minds in business, and the spirit in which many leaders among corporations are approaching the subject.

Managements have come to realize that they now are responsible to virtually everybody: to stockholders, large and small; to government; to workers; to customers, and to the public.

The continually enlightened attitude of the businessman toward activities previously considered extracurricular for him should contribute much to that society of free men that we all wish to maintain.

Applying investment trust accounting to

Consolidated Endowment Funds

ROBERT D. FUNKHOUSER

Controller, Dartmouth College

I SHOULD LIKE TO EXPLORE TWO PARTICULAR accounting problems that are met in the administration of consolidated endowment pools.

These problems are (1) the distribution of income to the various funds in the pool and (2) the evaluation of the principal of a fund that is being transferred from the pool.

Years ago, when it was possible to invest separately each endowment fund, these problems were not encountered. Each fund's income was the income of its particular investments. And the value of a fund being transferred was simply the selling price of its particular investments.

It is common practice now, however, for many institutions to consolidate for investment purposes a large number of their endowment funds. In this consolidation certain problems are presented, problems that arise mainly from the changing market levels of the investments. I have mentioned two of these problems and should like to illustrate them by discussing some oversimplified and exaggerated situations.

SEPARATELY INVESTED FUNDS

In line 1 of the table on the following page are shown details of Fund A, established at Date 1, upon the receipt of a gift of \$100,000 (column b). Let us assume first that this fund is handled as a separately invested fund and that investment is made in hypothetical security priced at \$100 a share (column d). The \$100,000, therefore, buys 1000 shares of that security (column e).

By Date 2, let us assume that there has been a big drop in the market and that this hypothetical security is now worth only \$50,000, or \$50 a share

From a paper presented at the annual meeting of the Eastern Association of College and University Business Officers, Washington, D.C., November 1953.

(line 2, columns c and d). At this time a second gift of \$100,000 is received and a second separately invested fund is established, Fund B (line 3). Investment in the same hypothetical security at this market level means that the second \$100,000 buys 2000 shares of that security (column e). The income of Fund A during the next full year, with an assumed dividend rate of \$4, is \$4000 and the income of Fund B is \$8000 (column g).

Or, let us assume *instead* that at Date 3, the market for this hypothetical security has gone up and that the original purchase is now worth \$200,000, or \$200 a share (line 5, columns c and d). Let us say that another \$100,000 received at this time is used to establish Fund C (line 6). At this market level, only 500 shares of our hypothetical security can be bought (column e). Fund A, therefore, during the next full year, with an assumed dividend rate of \$6, has income of \$6000 and Fund C has income of \$3000 (column g).

As has been mentioned, there is no problem in the distribution of income to these separately invested funds. The changing market conditions affect *what can be bought* for each fund, but each fund's income is immediately identifiable as the income of its particular investments.

CONSOLIDATION OF INVESTMENTS

Now let us see what the effect is if we decide to consolidate or pool these funds for investment purposes. The pool formed by the consolidation of the investments of Funds A and B is made up of 3000 shares of our hypothetical security (line 4, column e). But these are the investments of the *pool*; they have lost any particular identification as the investments of a particular fund. Likewise, the *income* of these investments has lost its iden-

tification as the income of any particular fund. The income of the investments is the income of the *pool*, and therefore distribution or assignment of this income must be made, in some manner, to the various funds.

The book value of each of these funds has of course remained at \$100,000. If the \$12,000 income of this pool is distributed on the basis of book value, each fund receives an equal amount, \$6000 (column h). But this is considerably different from the income that each of these funds received as a separately invested fund.

The effect of the consolidation of the investments of Funds A and C is similar—equal income to each of the funds (column h). This again is quite different from the income that each of those funds received when they were separately invested.

DISTRIBUTION OF INCOME

The foregoing illustrations are both oversimplified and overexaggerated. Most institutions have many different funds and many different investments, and market fluctuations rarely are as violent as we have here assumed. However, whether the fluctuations of the market are large or small, it seems obvious from the foregoing illustrations that whenever investments of endowment funds are pooled, we should consider the relationship between the *market value* of the already held investments and the *book value* of the new funds being admitted into the pool. This relationship is particularly significant in its effect on the distribution of income. (We shall discuss at a later point the effect of these changing market levels on any funds being retired from the pool.)

It may be argued that when the income of all funds is credited to accounts entirely within the institution, to instruction or plant maintenance, for

APPLICATION OF INVESTMENT TRUST ACCOUNTING

	a.	b.	c.	d.	e.	f.	g.
		Cash Received (Book Value of Fund)		Investment Purchased Price per Share	No. of Shares Bought	Earn. per Share	Income for Year
Line	Fund		Market				
<u>DATE 1</u>							
1	A	100 000	100 000	100	1 000		
<u>DATE 2</u>							
2	A	100 000	50 000	50	1 000	4.00	4 000
3	B	<u>100 000</u>	100 000	50	<u>2 000</u>	4.00	<u>8 000</u>
4		200 000			3 000		12 000
<u>DATE 3</u>							
5	A	100 000	200 000	200	1 000	6.00	6 000
6	C	<u>100 000</u>	100 000	200	<u>500</u>	6.00	<u>3 000</u>
7		200 000			1 500		9 000

instance or to one department or another, this variance in amount distributed makes no difference. This generalization is hard to defend. It *does* make a difference, and many times an important difference. But even if it didn't, whenever an institution receives a gift that establishes a fund subject to the reservation of life income, then the income, at least for a period of time, is paid to someone *outside* of the institution. This variance in amount distributed then becomes extremely significant—to the institution that the recipient of the life income is not overpaid (at the expense of the beneficiaries of the other funds) and to the donor that he is adequately paid.

Reference to the accompanying table shows clearly the differing amounts that the institution would have paid

as *life income* on Funds A, B and C, depending upon whether they were separately invested or whether they were pooled and the income distributed on the basis of book value. But not all gifts can, or should, be separately invested. "Is there any way in which the income of consolidated funds can be distributed in a manner as equitable as if each fund were separately invested?" is a natural question.

WEIGHTING METHOD

As early as 1932, H. C. Edgerton, then treasurer of Dartmouth College, developed a system whereby funds being admitted to the pool at the low market level prevailing at that time received for purposes of calculating the distribution of income a "weighting" or, as we called it, an "additional participation" over the strict book

value of the funds. This weighting was arrived at by the use of a *factor* based on the relationship between the market value and the book value of the investments already in the pool. The weighting was a *plus* weighting or a *minus* weighting, depending upon whether the market value was below or above the book value.

DARTMOUTH CHANGES METHOD

The simplest method, and one which procures the same result as a properly operated "weighting" method, is to follow the generally accepted accounting practices of open-end investment trusts. These practices are substantially identical with the "common trust fund" rules laid down by various states.

Dartmouth College changed to this investment trust or "share" method on July 1, 1951. The weighting method

TO CONSOLIDATED ENDOWMENT FUNDS

h. If pooled, Dist'n of Inc. on Book Value	Dist'n on Share Value		
	1. Price per Share	j. Number of Shares	k. Dist'n on Shares
	1.00	100 000	
6 000	.50	100 000	4 000
<u>6 000</u>	.50	<u>200 000</u>	<u>8 000</u>
12 000		300 000	12 000
4 500	2.00	100 000	6 000
<u>4 500</u>	2.00	<u>50 000</u>	<u>3 000</u>
9 000		150 000	9 000

was abandoned for two principal reasons: (1) We felt that the arithmetic of the calculations in the new method was less involved, and (2) we felt that this method would be more readily understood by the donors of funds subject to the reservation of life income. The investment trust method was much easier to explain to prospective donors than the weighting method.

While 10 people might handle the mechanics of this method in 10 different ways, its basic principles are simple and easily operated, as we soon shall see. We added no office help when changing to the new method, nor did we find that it put an added burden on any of our staff. A few more calculations are required than with the book value method, but it is possible to do these at convenient times

throughout the year. In comparison with the weighting method, we found definite practical advantages in the investment trust method.

PRINCIPLES OF NEW METHOD

The principles of investment trust accounting, briefly stated, are:

1. The current market value of the investment portfolio of a trust or pool is established whenever new shares are issued or old shares are retired.

2. This appraisal establishes for that particular time the "share value" of those shares already in the pool. This is accomplished by dividing the market value of the pool by the total number of shares outstanding.

3. New money is accepted into the pool at this share value. Thus the number of new shares bought is determined by dividing the new money

by the price per share. This number of shares for each of the new funds does not change.

4. Old shares taken out of the pool are retired or sold at this same share value. (Illustrations of this will be given later, together with a discussion as to the reasons for any such transfers.)

5. The number of shares established for each fund rather than the book value of the fund is the basis for distribution of income.

APPLICATION

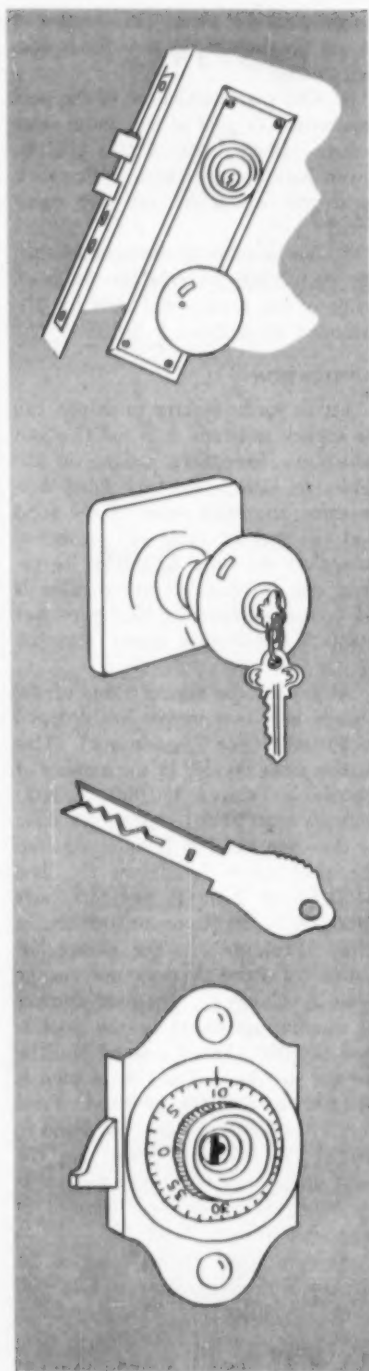
Let us see how these principles can be applied to Funds A, B and C, about which we have been talking in the table. At Date 1, the time Fund A is invested, the book value of the fund and the market value of its investments are the same, \$100,000. Therefore, the distribution share value is \$1 (column i) and the fund purchases 100,000 distribution shares (column j).

At Date 2 the market value of the already held investments has dropped to \$50,000 (line 2, column c). This market value divided by the number of distribution shares, $\$50,000 \div 100,000$, gives \$0.50 as the price per share at the time Fund B is admitted into the pool (line 2, column i). The \$100,000 of Fund B therefore buys $\$100,000 \div \0.50 , or 200,000 shares (line 3, column j). The number of shares for Fund A does not change (line 2, column j). The total number of distribution shares in the pool is now 300,000 (line 4, column j). The income for the year per share then is $\$12,000 \div 300,000$, or \$0.04. Fund A receives \$4,000 income, and Fund B, \$8,000 (column k). These are the same amounts which these two funds received when they were handled as separately invested funds.

At Date 3, the market value of the already held investments is \$200,000 (line 5, column c). This establishes a price per share of $\$200,000 \div 100,000$, or \$2 (line 5, column i). The \$100,000 of Fund C then buys $\$100,000 \div \2 , or 50,000 shares (line 6, column j). The total shares of this pool are then 150,000 (line 7, column j). The income is distributed on the basis of $\$9,000 \div 150,000$, or \$0.06 per share. This gives Fund A \$6,000 income, and Fund C \$3,000 income (column k), again the same income as when these two funds were separately invested.

(To Be Concluded Next Month)

Start Early to Select the



How to
BUY and APPLY

BY FAR THE MOST IMPORTANT PROBLEM to be overcome in obtaining a good hardware installation is the lack of complete and detailed coordinated planning in relationship to function, initial cost and future maintenance. There is reason for this lack. It is common practice in designing a building to treat hardware as a fitting that need not be considered in the initial planning. Therefore, the hardware consultant is often not called in until the plans have been more or less readied for bid. At this time he is expected to write a hardware schedule that will fit the building detail.

If the hardware is decided upon at this late time, the hardware consultant is no longer in a position to advise upon the hardware best suited to the building problem because the architectural detail has already been set. He can only schedule the hardware that will fit the detail. This approach rules out the possibility of detailed and coordinated planning of a hardware installation.

To arrive at the proper approach, we must determine what aspects of building planning should affect the choice of proper hardware. The more important aspects are: (1) initial cost (relative to future maintenance), (2) type of occupancy, (3) load and unload conditions, and (4) the relative importance of architectural beauty as opposed to reasonable cost and proper function.

Proper study and planning in the early stages of development, with the help of a qualified hardware consultant, will lead both to the better understanding of the detailing problem, imposed upon design by the different types of hardware, and to standardization of hardware types. It is obvious that if hardware types are standardized, then installation details will be standardized, and savings will be realized in the cost of hardware, frames and installation.

It should be kept in mind that there are three general groups of hardware.

The first group is designed with function, reasonable price, and installation cost as the prime considerations. The second group is built to fit in a space that will allow the architect the greatest freedom to design. Although the unit cost compares favorably with the first, the function and installation cost do not. The third group meets the architect's need for freedom of design and compares favorably with the first group insofar as function is concerned, but the unit cost is two to three times greater and the installation cost is considerably higher. The foregoing remarks apply primarily to door closers and exit devices. However, in determining the cost of any hardware, the price of installation should be included.

With these thoughts in mind, we will discuss some of the hardware and design details suitable for university buildings, assuming that function and reasonable cost are considered to be of prime importance. We will assume that the building will be built under the conditions imposed by the use of public monies. I mention this because in the matter of locks the situation is such that, if locks with pullman latches are specified, we can no longer get three bids in the same price range and therefore cannot get a fair bid.

WHEN CHOOSING LOCKS

In the lock field, the lock that is rapidly gaining popularity, in part because of its low cost, is the heavy duty cylindrical lock. This lock can now be had in all functions and with all types of keying. It is relatively inexpensive, has a good life expectancy, and is economical to install and maintain. Its one shortcoming is in that the type of latch used offers more resistance to the door closer than does the pullman type of latch. However, steps are being taken to overcome this drawback. The spring tension is being reduced, the angle of the latch and strike are being improved, and oilite bronze is being used in some of the latches.

With proper planning, the number

Hardware for That New Building

NORBORNE S. ENNES

Foreman, Mechanical Department, Buildings & Grounds
University of California, Los Angeles

of lock functions used in a building can be reduced to a minimum. The following are suggested functions:

All locks to be standard backset and to be equipped with dead locking latches. Doors must have a 5 inch style, preferably 1 3/4 inches thick.

Offices to be equipped with the office type of lock, which has key control from the outside and finger operated stopworks on the inner knob.

Classrooms and laboratories to be equipped with the two cylinder classroom lock with key control from the outside and key controlled stopworks on the inside.

Utility spaces to use either the rigid knob type of key from the outside (at all times) or one of the auxiliary line of locks if the building code permits.

Communicating doors (where the direction of control is in a state of flux) to be equipped with a lockset with finger operated stopworks both sides.

Communicating doors (where the direction of control is known and a key function is not required) to be equipped with a lockset with a finger operated stopworks on one side. Two types available are in this function: one allows the stopworks to snap out when the inner knob is turned so that the person passing through will not be locked out. In the other, the stopworks remains engaged. It is a matter of choice as to which better fits the need but, for the sake of standardization, it is advisable to choose one or the other for use throughout the building.

Private lavatories to be equipped with a lock with snap-out function on the stopworks and an emergency control of the stopworks in the outer knob. If key control of the lavatory is desired, the office type of lock should be substituted.

Doors not requiring locks to be equipped with latch sets.

As to choice of butts, insofar as the size and number to be used are concerned, the recommendation of the manufacturer should always be taken.

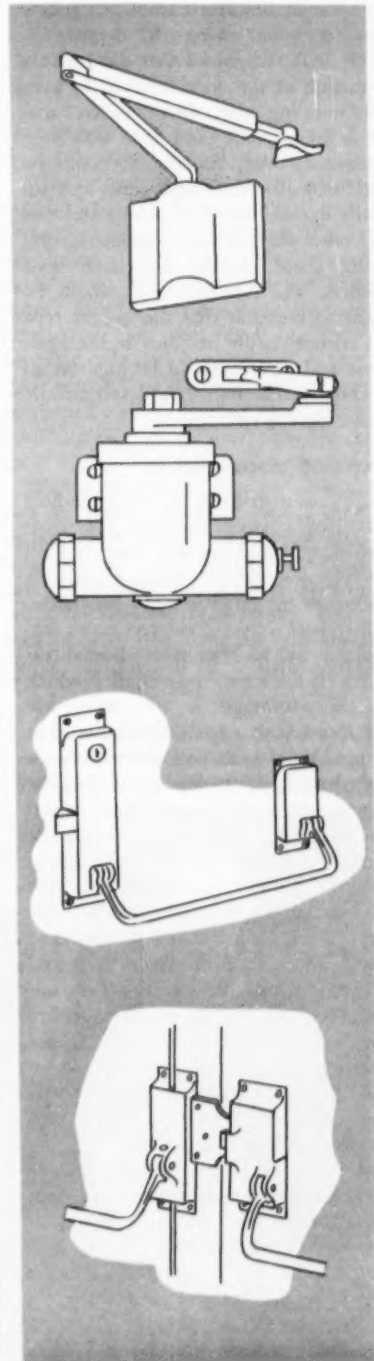
If a choice is to be made among steel butts, plated butts and bronze butts, a careful analysis of the true cost (cost installed and painted) should be made. If this is done, I believe it will be found that, although the unit price of bronze butts is higher, in the end they are as economical as any to use.

TIPS ON INTERIOR DOOR CLOSERS

The greatest abuse of proper planning occurs in choice of door closers for interior use. This is the result of the conflict over proper function, reasonable cost, proper detailing and architectural beauty. In defense of the architect, it should be said that if the hardware manufacturer would improve the appearance of the surface mounted closer, instead of leaving it in a class with outside plumbing, the architect would offer less resistance to its use. I should like also to point out that in this field the greatest saving in cost can be made. Once the closer to be used is chosen from the three groups mentioned, the saving is made not by undercutting the manufacturer's specification but by eliminating the closer entirely where its use is not mandatory.

The most economical and functional closer (installation cost considered) for use on interior doors is the surface mounted type. This type of closer should be specified to be of the two-stage control, equipped with key valves and hold-open arms. The hold-open arms should be deleted on lavatories. Two-stage is specified so that the initial closing speed and latching speed can be adjusted independently. The key valve is specified so that only authorized and properly trained personnel can make any adjustments to the closer.

The use of this type of closer imposes rigid requirements on the planning of doors, frames and door openings. Assuming a size 3 closer and a 3 foot door, the following are some of the conditions: Five inches must be allowed between the finished face of the wall and the face of the door. If



this requirement is not met, all closers will have to be hung on brackets. This will reduce the efficiency of the closer, restrict the head room in the opening, and make the installation even less attractive. The door cannot be less than 7 feet high. If the door is less than 7 feet high parallel arms will have to be used, which will reduce the efficiency of the door appreciably. The top stop must be wide enough to allow the use of wide brackets because the use of brackets cannot be avoided on doors that swing 180 degrees.

If it is recognized that the primary function of the door closer is to keep the building quiet, then it follows that it is needed only on a door with high frequency use. Broadly, it could be said that all doors from rooms to main halls should have door closers and that all other interior doors, unless specifically noted, should not have door closers. At this point, it would be well to mention that the button type of silencer is the best buy in the business and that it should be used on all metal frames. Its use will successfully mute door slam.

EXTERIOR DOOR CHECKS

Rather than trying to cover the field of door closers available for large ornamental and exterior doors, I shall merely describe the features available in one of the single acting floor checks. This check offers good service at reasonable cost and has some unusual features. It has a two-stage control, which is an advantage if the doors are equipped with a latching device. If it is used on glass or hollow metal doors, the design of the top pivot and the lower arm make it possible to adjust the back edge of the door in and out from the frame. This is a great help in later maintenance. This check can also move the door up and down by the use of jack screws in the case. Built into it is a hold-open stop and a back checking feature. This rules out the need for any expensive auxiliary hardware and allows a clean entrance detail. I have mentioned only one of a large group of devices available, and the merits of all should be examined before a choice is made.

This brings us to the problem of entrance design and its hardware. Here every concession should be made to architectural beauty, except one. The one concession that cannot be made is that of proper function. Unfortunately in many cases, function is sacrificed and a maintenance problem is created that

cannot be solved. I have seen instances in which a badly functioning door closer has permitted the door to shear off its top pivot, crush its projecting hardware, break its glass, loosen its frame, and even cause accidents by restricting the size of the opening.

Regarding exterior doors, I shall make two statements of design, but I suggest that this problem be gone over thoroughly with a hardware consultant. *The door must be able to swing a full 105 degrees.* This degree of swing, incidentally, would improve the function of any door, interior or exterior. The door must be rigid and must be able to carry its own weight and the weight of the glass without distortion. This is not true of many narrow stile doors.

SELECTING PANIC BOLTS

The use of panic bolts is another aspect of hardware that is a long way from being solved, from either the hardware or architectural point of view. The only reasonably secure, attractive and functional panic bolts available are designed for single doors with 5 inch styles. There are ways to reduce all panic equipped doors to these requirements. To anyone interested, a hardware consultant can demonstrate how, by using removable mullions and the like, this can be done. Actually in doing this type of planning advantages in traffic control, safety and security can be gained. However, the architect would be given problems in design that would not fit into today's conception of what is architecturally beautiful. Therefore, this discussion of panic bolts will be limited to the functions found most acceptable by architects.

The first type of panic bolt is usually applied to the surface of wooden doors but is concealed in hollow metal doors. It is a vertical rod type with free pullman latches top and bottom. This type is used only where there is a raised latch track threshold.

The second type is used where a raised threshold is not called for. It is the same as the first except that it is equipped with a catch that, when the door is opened, holds the latches retracted until the door has closed again. It is the catch releasing device in this bolt that causes the trouble. It requires constant maintenance, offers resistance to the door closer, and, if the door warps out at the top, it often fails. For both of these devices it should be

specified that they be left in the unlocked position only by dogging down the crossbar. It is a common practice to specify the second type of bolt where corrugated thresholds are used to avoid the noise made by a latch dragging over the threshold; this practice should be avoided. During the time these doors are in operation, they should be locked in the open position so that excessive wear will be avoided. During the time the bolts are in the locked position, the building has little or no occupancy so the noise made by an occasional passage through these doors will find few ears to fall upon.

KEYING MUST BE PLANNED

Keying of doors cannot be a hit-and-miss proposition but must be planned in full detail for present and future needs. Also, if the building owner does not receive complete records of the initial installation and its allowances for expansion, he will not be able to either maintain or change it. Furthermore, in deciding on the lock to be used, the keying possibilities of both the double and single plug lock should be investigated.

Proper installation of building hardware is an important matter. Much of the improper functioning of hardware is the result of poor planning or improper installation. If the building has been properly planned and detailed, installation becomes a matter of following the accompanying instructions of the hardware manufacturer to the letter. However, some instruction sheets are far from clear; I strongly recommend that the installer seek clarification whenever there is a shadow of a doubt. For the installation of locks of the cylindrical type, the use of drill jigs is required.

As far as maintenance of hardware is concerned, assuming it has been properly planned and installed, the per unit cost of maintenance should be very low. Those institutions that have a definite problem in maintaining hardware should remember that suppliers have consultants available and all manufacturers have representatives. These men, when properly qualified, are either experts in the over-all field of builders' hardware or specialists in a specific field of hardware. Their interest is to sell their product and to see that it performs its function properly. For this reason they are vitally interested in proper planning, installation and maintenance. Their services are free and generally eagerly given.

What to look for in BUYING FURNITURE

How to
BUY and APPLY

J. R. WAIT
Auburn, N.Y.

THE BUYER OF FURNITURE TODAY will find the picture greatly changed on sources of supply; it also has changed on styling and on finishing.

Years ago, the best furniture was manufactured, for the most part, in Grand Rapids, Mich., and in Jamestown, N.Y. Today hundreds of new manufacturers in all sections of the country have sprung up to complicate the buying situation.

Styles formerly were held for the most part to period designs, and finishes were simple. Furniture used to be made of oak, mahogany, walnut, birch and maple. Even colors of finish were standardized. Today, with the advent of "modern," new designs have sprung up in such quantity and finishes are of so many different colors that it is difficult for the experienced buyer to keep up. Visits to the furniture markets at Chicago, Grand Rapids, New York, and Jamestown have become almost a necessity in order to keep track of lines and styles.

In buying furniture, several factors can well be kept in mind: (1) manufacturer; (2) construction; (3) design and finish; (4) upholstery and materials for upholstery; (5) price to fit into an appropriation.

CONSTRUCTION

Production of furniture, unlike other modern productions, is still basically a handicraft. The actual assembling of the machine cut pieces and the fitting and reconciling of the vagaries of wood demand that good work be done by skilled hands. It is at this point that the cheaper qualities fall down; the machine construction is good but the hand labor is skimped. Quality must be built into furniture.

From a paper presented at the New York State regional meeting of the National Association of Educational Buyers, November 1953.

The making of chests and cabinets (the classification known to furniture men as casework) exhibits the most demanding artisanship. In examining the case, see how well drawers and doors operate, and how close the fitting is. Open a drawer and see if it rattles. A dustproof panel between each drawer is desirable. The drawer itself should be dovetailed at the corners, although with some designs this is not possible. The bottom of the drawer should be a three-ply panel. The material of the drawer sides and guides constitute a fairly safe index to the quality of the piece. In fine work mahogany or oak will be used for drawer sides. Successively less expensive work will utilize birch, sycamore, maple, gumwood, poplar and basswood. An easy way to determine quality is to rap your knuckles against

the side panels of any chest or dresser. A "solid" sound should result.

Wood must be recognized as an organic material. Even with the most perfect seasoning and selection, it still may react in some way to variations in the moisture content of the air. You cannot detect in any piece of furniture whether or not the wood has been properly seasoned, but you can expect that certain woods will exhibit less pronounced reactions than others. The best factories go to great lengths in their drying and seasoning process.

Walnut and mahogany are perhaps first on the list of cabinet woods, then maple, cherry, birch, oak, gumwood, magnolia and pine. Maple, birch and cherry are hard woods and they will withstand many years of service. Hard rock maple is the strongest and finest maple there is. It is a hard heavy

The construction of furniture is one of the factors to consider when buying. Others to keep in mind are the manufacturer, design and finish, upholstery and materials for upholstery, and price.



wood and wears well. Canadian birch is very highly rated. They are good woods for dormitory use.

Most other woods occur as veneers, in which case the strength of the core and the method of making are the vital factors. There are places in which the solid wood is best structurally; there are others where nothing but veneer panels should be used.

Glue is a primary substance in the manufacture of furniture. Glues for every purpose, whether veneering, surfacing or end joining, have been subjected to tremendous technical research, so that today's furniture may be said to be fundamentally a matter of gluing. The proper and sufficient use of the various bonding or cementing agents welds joints that are actually stronger than is the wood itself.

Hardware is important also. Good fittings feel smooth, heavy, metallic; cheap ones are stamped out of thin metal and the finish looks artificial. Good catches snap quietly but firmly, and yield to a light pull. Hinges, where functional only, should be as unobtrusive as possible; in the best modern furniture they are often invisible or nearly so.

DESIGN AND FINISH

The actual finishing of furniture requires the greatest need for hand skill. Finishes by machinery lack quality; only hand rubbing produces a really fine finish.

Shellac, varnish, paint and wax, as finishes, are used as formerly, but new finishes, synthetically produced, have special advantages. Much furniture today is finished with lacquer, a nitro-cellulose product. After the usual preparation of filling and sanding the wood, the lacquer is sprayed on and rubbed to the desired finish, exactly like varnish is. Its speed of finish is its special virtue, but it also may be made to be resistant to alcohol, heat and moisture.

The advent of phenolic laminated plastic, first used on breakfast sets, restaurant tables, and counter tops, but now available in what are termed "real woods" for chests, dressers, night stands, writing tables, desks and other pieces, has given buyers an additional feature to consider. These tops will not be marred by smokers or spotted by alcohol or cosmetics. Nearly every leading manufacturer now makes these available on quantity orders. In fact, every type of wood finish can now be closely matched by this product.

The extra cost is still considerable per unit and the question of whether the extra cost is worth while in comparison with solid wood tops is still a question for debate. It is most important that a factory have adequate equipment for undertaking this type of work. Corners and edges come up unless the work is painstakingly done.

The construction of good chairs is to a considerable degree a question of proper design. There are no new basic ideas in design, but there are new ways of interpreting and adapting them, utilizing new methods and materials. Good basic design usually springs from a reason for being.

A chair represents the greatest engineering achievement of the furniture designer, as it is subject to the most varied stresses and demands. The ordinary side chair, if it must be designed to withstand tipping backward, must have a stretcher or system of stretchers near the foot. Generally, a chair with a wood seat is stronger than one with an upholstered seat. Stability of a chair depends much on its underconstruction. Corner blocks should be screwed in, and a box seat underconstruction is most important. As woods tend to cleave along the grain, a chair leg that does not exhibit a continuous grain stands a good chance of snapping.

UPHOLSTERING AND MATERIALS

Upholstery and upholstered chairs are the most deceptive productions of the furniture maker. Recognition of this fact has led to extensive state legislation toward compulsory explicit labeling of the inside materials of such chairs. The wood framework of an upholstered chair is best made of ash, birch, maple, elm or hickory. Less desirable are soft maple, gum, poplar, basswood and pine. Frames should be strongly glued, doweled and fitted with corner blocks, *never* nailed together. This makes the framework for the webbing, springs, twine, burlap, cotton and muslin that form the basis of the upholstering, which you can't actually see and must accept on faith.

A properly upholstered chair will have closely interlaced webbing sufficiently and tightly tacked; the springs will be stitched down and tied eight ways with a best quality twine. Over the springs should be a 10 or 12 ounce burlap, then moss or hair or rubberized hair, topped with cotton felt.

More recent upholstering technics include a spring made of a single zig-zag wire, stretched in a crown shape

over the frame. This replaces the familiar helical coil spring at a great saving of weight and labor. These are covered with hair or cotton pads, or, in better work, with sheets of foam rubber.

In many states loose cushions must be labeled as to contents. Down, hair, springs, kapok or cotton are the usual fillings.

Foam rubber is the outstanding newcomer in soft upholstering. Firm or resilient as required, it is more easily worked and is cleaner and more adaptable to simpler and lighter ways of providing a comfortably soft seating. It is still more costly than traditional materials, and seems to create some chemical problems so far as reaction to other materials, principally coverings, is concerned.

AKIN TO TAILORING

The actual covering of an upholstered piece is akin to tailoring and must be judged in the same way. Fine seams, properly tight surfaces, and matching of fabric are clearly apparent. Appropriateness of the fabric should be the first consideration. Lightweight or thin fabrics on much used pieces are headed for disaster. The front edges should be upholstered soft, so as to protect the material from excessive friction.

Plastic materials of many chemical bases are in use now for fabric purposes. Many of them are particularly suitable where utility and durability must go hand in hand with comfort.

Good leather furniture has again become available and, if cost is not a consideration, a good looking room is assured whenever leather is used. For maintenance it is most important to treat it at regular intervals with good saddle soap.

Because nylon upholstery fabrics offer such outstanding advantages in terms of long wear and easy care, furniture manufacturers have become increasingly aware of the versatility of this material. Inherently strong and durable, nylon yarn provides upholstery fabrics that withstand hard treatment. Since dirt does not easily penetrate the smooth fibers, upholstery woven from nylon has a marked resistance to soiling. Frequently, satisfactory cleaning can be achieved with a damp cloth or with spot cleaners.

The smoothness of nylon fibers also has created minor problems for the weaving mill and furniture manufacturer. Slippage, caused by sewing the

fabric too close to cut edges, particularly where foam rubber is used, frequently has plagued the manufacturer in the use of nylon upholstery fabrics.

When using nylon, we have found it best to specify a muslin cover over foam rubber to prevent the friction that causes tearing along the seams. We consider the bouclé, frieze and loompoint types of nylon the only ones safe to use.

For college and institutional upholstery work, we definitely do not approve of many cotton fabrics, except tweeds, because of their tendency to soil and fade.

DORMITORY BEDS

The bed that seems to be virtually foolproof is the three piece bed with head and foot of simple tubing and equipped with a good double deck coil spring made with stabilators on each edge so that when someone sits on the edge of the bed the spring holds straight instead of pushing in or out. The specially "built for institution" innerspring mattress is still the most satisfactory mattress and the least expensive in the long run.

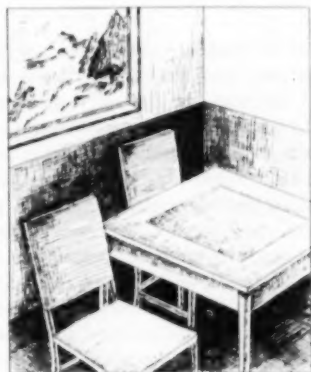
The word "modern" is used to label the current approach to design. This new method of designing has no rules. Any style begins with a few individuals working in a purely personal way. Their influences spread, coalesce and develop, and the variety of their character, attitudes or vision is bound to be noticed. Furniture today, particularly modern, has been associated with and known by the name of its designer rather than the manufacturer's name. It does not necessarily follow that the signature of the designer creates a masterpiece. The excellence of the interpretation means more than the signature. A piece with a pedigree may be an eccentric. The work of art is more important than the artist.

There are countless names for finishes on the new modern, but they are meaningless as they are used indiscriminately by manufacturers to label whatever color they happen to arrive at either by accident or design.

No infant style starting on its career ever had so many materials to draw upon or such highly developed technique in using them as has modern. Modern furniture is neither better nor worse than period furniture today, for the same elements of workmanship and construction must prevail. Some technical features about the design of modern furniture, if improperly exe-

cuted, invite greater expense and uncertainty, and these demands must be accorded due consideration. To illustrate, the flush surfaces that are accepted as elementary in modern designs are not fundamentally good woodwork, as they do not take into account the tendency of various grains of wood to move microscopically. No such flush joint over a long period of time can reasonably be expected to remain exactly as it was made. Most historic furniture has lived because the nature of the material was taken into account and the design was made accordingly.

Similarly, anything experimental or new is no more perfect than is the old. And the modern as a style or system of design may not be considered entirely free from the likelihood of such



failures. Likewise, bizarre exaggerations of any shape will in all likelihood suffer with the passage of years and not contribute on the whole to the formation of a clear and distinct style.

Reactions to molded plywood shells as chairs have progressed rapidly from startled surprise to easy acceptance. Light in weight, strong, conforming to body shapes, and airy in appearance, molded shells some day perhaps will be as cheap as their technology and appearance indicate they should be.

Let your first criterion of modern furniture be, "Is it natural and reasonable?" This will eliminate the tricky, the gaudy, and the obviously "styled." There can be no such thing as authentic "modern."

PRICED TO FIT

The budget consideration is so vital that the allotment of money for furnishings and its most intelligent application should be considered before any definite move is made. It is better to limit the number of articles rather than to sacrifice quality. Yet, above a

certain price, you no longer buy better quality, but more detailed style, design or limited production.

The level of taste is steadily rising; more and more people are becoming conscious of the nature and the value of good design; there's a growing understanding of how to get your money's worth; people are less impressed by ostentation and affectation.

"What the public wants" seldom is determined by the public but by the manufacturers, promotion experts, factory salesmen, and buyers for the stores. There are worth-while things and many worthless ones on the market. You can't tell the difference by consulting the advertisements in magazines on home furnishing. It's up to you to make the proper choices.

When planning furniture and furnishings for any room, have the floor plan of such a room drawn to scale, then figure out the number of pieces of furniture needed by cutting out small pieces of cardboard representing sofas, chairs and occasional pieces, drawn to scale, and fit them into the room spaces by moving them around to positions where they will best serve the purpose for which the room is intended. The approximate number of persons to be seated is a guide.

In planning the decorative setup of any room a few simple things should be kept in mind. Floor coverings, upholstery materials, curtains and furniture should be controlled by the nature of their use, by what is practical in the particular setting.

If a room is small, few colors should be employed in the scheme. Variety can be achieved by repetition of the predominating color tones and by introducing in small objects a few spots of color in sharp contrast. This will make the room seem larger.

Bright complementary colors keep large rooms from looking like barns. Best effects are achieved with one or two clear, true predominating colors with their opposites grayed.

Pattern must be controlled. Figured curtains, carpets and upholstery, all in one room, give a restless and uncomfortable effect.

In determining the source for buying furniture in quantities, say for a dormitory or a cafeteria or dining room, transportation costs are an important consideration.

After all is said, you must buy largely on faith and on the experience and reputation of the people with whom you deal.

APPLYING specialized knowledge **to the selection of** **PAINT**

DAVID J. WATSON

*Superintendent of Buildings and Grounds
Clemson College, Clemson, S.C.*

How to
BUY and APPLY

THE AVERAGE INSTITUTION OF higher learning usually has a great variety of buildings and physical structures to maintain. Painting is perhaps the largest single item in a long list of maintenance problems. All colleges and universities have dormitories, dining halls, classrooms, classroom buildings, and residences of some type. Others have science laboratories, shops, infirmaries, bakeshops, swimming pools, athletic plants, and various other facilities that call for specialized knowledge of paint products and their application. Perhaps no other business has a wider range of paint usage than has the technical educational institution.

In this discussion we cannot go deeply into any one phase of the paint maintenance problems. We shall concentrate on some of the fundamentals that are more or less common to all.

"SAVE SURFACE, SAVE ALL"

A few years ago the paint manufacturers had a slogan "Save the surface and you save all." This ideal was forgotten for a while, but recently we have seen it coming back into common practice.

The term "paint" refers to those products composed of pigment, vehicle and thinner, which, when applied to various surfaces, form a film that possesses one or more of the properties of *protection, decoration, sanitation and light reflection.*

The manufacture of paint usually starts in the laboratory with the chemist. He has at his disposal a large number of pigments; a stock of oils

such as linseed, chinawood, perilla, soya, fish and dehydrated castor; several thinners, and at least three driers.

In addition to this, the modern paint laboratory has other materials such as phthalic anhydride, maleic anhydride, pentaerythritol, glycerine, and so on. With these at hand, chemists begin to develop processes and formulas for *intermediates*, which are called bodied oils, blown oils, gum cuts, oleoresinous varnishes, alkyd varnishes and driers. With these vehicles or intermediates, the formulator combines original oils, pigments and thinners, and by batch experimentation comes up with a formula making the desired paint product. It usually is customary in larger plants to produce batches of paint, varying from one to 25 gallons, in a pilot plant before the paint goes into the production stage.

MIXING STAGE

The next stage of paint manufacture is mixing, which takes place in a large steel tank open at the top, in the center of which is a vertical shaft to which is attached a series of blades. This shaft rotates at a fairly slow rate of speed and the blades stir the ingredients until they are thoroughly mixed. It is considered of utmost importance that all pigments be thoroughly "wetted" before the paint goes on to the next process, which is that of grinding.

Generally there are three types of grinding mills in a paint factory: the buhrstone mill, the roller mill, and the steel ball mill. All are used for the same process: that of completing

the mixing process and getting all the pigments reduced to the proper degree of fineness. Each of the three mentioned types of mill is particularly adapted to certain pigments and conditions. For example, some pigments like a silicate may be too abrasive to use on a highly polished steel roller mill and the buhrstone will be more suitable.

THINNING AND TINTING

The next process is called thinning and tinting. The exact amount of vehicle is added to the paste paint, which comes from the grinding mills, until the desired viscosity is attained. The tinters operate at this stage and add the coloring materials prescribed in the formula. Usually, they have to make some slight adjustments to reach the desired tint. The paint is then strained to remove any skins, pigment lumps, or dirt that may have crept into the batch somewhere along the line. This paint is then poured into the cans, labeled, packed and stored until shipped.

I shall briefly discuss varnish making, because it is playing a more and more important part in paint making. The liquid vehicles used in enamels and in many common paints, such as interior gloss, semigloss or interior flat, are either varnishes or mixtures of varnishes and heat-bodied or blown drying oils.

Briefly, varnish is made by heating certain oils (principally chinawood oil) and resin together in an open pot or a kettle made of steel or copper. More recently these kettles are being



The white and green paints of several manufacturers are being tested on this fence for wearability and

fading of the green. This is the second series that has been run on this fence in the last eight years.

made of stainless metal. The older varnish plants consisted of stacks or arches arranged in orderly rows to take off the fumes caused by heating from a source of heat applied underneath the kettle. This oil and resin mixture is heated usually to more than 500° F. Heating disperses the resin in the oil and produces some chemical reaction, but, by and large, the heating process is to make the resin uniformly dispersed throughout the oil. Cooking raises the viscosity of this mixture, which permits thinning with some volatile thinner making a sirupy liquid.

DETERMINING FACTOR

The proportion of oil and resins determines the type of varnish. When a large proportion of resin is used, a varnish with very brittle film is produced; one with a larger proportion of oil will produce an elastic film. Spar varnish is an example of one in which the oils predominate.

In recent years, glycerol phthalate or alkyd resin varnishes are playing an increasingly important part as vehicles in pigmented products. Alkyd resin was once spoken of as synthetic resin. In reality, it is a product made by chemical combination of soybean oil, glycerine and phthalic anhydride in exact chemical proportions and cooked in expensive kettles. Alkyd finishes are extensively used in white refrigerator finishes, a large section of automobile finishes, and many of the automotive lacquer finishes, marine finishes, and railroad finishes. Alkyds are considered by many chemists as the *outstanding vehicle* for a great variety of uses

at this time. We should all do well to familiarize ourselves with them if we have not already done so.

We shall now consider some of the different types of paint and their application.

By far, the commonest and most important type of paint is the exterior paint commonly spoken of as "house paint." This is really the product that should engage our most careful consideration. It is the one that should justify the slogan "Save the surface and you save all." The time was when a "house paint" made of pure lead carbonate or lead sulfate, zinc oxide, linseed oil, and a little drier was considered the best paint that could be bought. Gradually we saw silicates and asbestos added and were told by salesmen that this improved the workability and the quality of the product. Sometime later we learned of the addition of titanium dioxide and we were told that this was another forward step. This increased the hiding power, made the paint more workable, and gave more coverage.

FREE OF ZINC

Most house paint today is entirely free of zinc and in many instances contains no lead. The pigments are largely titanium, some silicates, vehicles and driers. The Forest Products Laboratory has found that southern yellow pine is one of the most difficult woods to keep painted. The slow growth of the spring wood and the rapid growth of the summer wood produce hard and soft layers that paint will not adhere to uniformly.

This led to the development of a non-penetrating type of undercoater or a paint film that would bridge across the soft rings of summer wood.

The so-called two-coat system of paint offered by manufacturers today is perhaps the most commonly used exterior paint on the market, certainly for new work. Most of us have to deal with the maintenance painting that has been done for many years; therefore, we have to adapt some of these two-coat systems to our old work. Generally, if the paint on the wood is in reasonably good shape, it is not necessary to use the undercoater; however, in many instances the undercoater *is* desirable even on old work.

PAINT FAILURES

The matter of paint failures, particularly on wood, is a subject that should claim a great deal of thought and attention. I have mentioned the one failure of the paint film in not sticking to the hard growth of spring wood. There can be the penetration of moisture from the interior that might produce the paint failure on the soft or summer wood.

A great deal of new thought has been spent on the matter of exterior painting brought about by moisture penetration, both from the outside and the inside. Air conditioning, for example, produces a condensation that can cause an accumulation of moisture on the inside of siding that would be seriously detrimental to the paint film on the exterior surface. Perhaps in new work we should guard against moisture penetration by being sure of



Above: Mildew occurs in pools, shower rooms, and damp basements, or other places where hot and cold water are used.



Below: This type of failure occurs after many coats of paint have been applied, building up an excessively thick paint film. The last coat does not make contact with the wood surface, which is the cause for cracking and peeling.



Above: Woodwork saturated with water during fire had not dried thoroughly before the building exterior was repainted.

some type of vapor seal under all of our wood siding, especially yellow pine.

In addition to the change of formulation in the pigment of our outside paints, perhaps the most radical and important change has taken place in the vehicle formula. Many chemists say that by choosing the right vehicle, it is not too important to consider the pigment. However, a pigment consisting of titanium, for whiteness and coverage, and a certain amount of lead is important in any house paint. There is a great deal of demand for deep tone colors and we must be sure that the coloring, which is usually an inert material and normally does not have much durability, should not predominate in the pigment.

In modern day construction, we have many steel sash and steel doors. We cannot be too particular in seeing that all steel, when installed, is properly shop-coated with one of the better rust inhibitors. It is a well conceded fact that red lead, lead chromate, zinc chromate, strontium chromate, and zinc dust are the best inhibitors of rust. Two commonly used shop coatings are iron oxide and aluminum, neither of which is rust inhibitive.

A steel member that it is important to observe carefully and be sure that

is properly shop-coated is the bar joist, which is being rather universally used at the present time. Some of our bar joist construction shows an outside deterioration from rust, we have observed recently. This particularly is the case when moisture comes in contact with the steel. There is also the possibility of condensation taking place during sudden changes in temperature, and this condition, too, is very detrimental to the joists. The engineer or architect writing specifications on steel work should specify a good rust inhibitive paint as the shop coating on steel.

INTERIOR FINISHES

Interior paint finishes constitute a broad field. It is nowhere near as important as is exterior paint. Interior finishes are mostly decorative. The time was when we used calcimine. We could not change from calcimine to oil flat wall paint without using at least three coats: one a good primer sealer, the next an oil flat wall tint, and then a second coat of the same paint, thus necessitating three coats in all. It was a slow, laborious process that provoked the man in charge of the work and caused the bursar to wonder where so much money was be-

ing spent in painting the inside of a building.

There has been a gradual evolutionary process in interior painting, largely in the interest of speed. We had casein or cold water paints; after that, the resin emulsion type, and now we have the so-called rubber base paint. Each one, presumably, was an improvement on the other. The casein paint was easy to apply, had good coverage, was not too washable, was subject to mildew, but really produced a pleasing decorative effect.

The resin emulsion type of paint did a reasonably good job and is still being extensively used. It is more washable than is the casein, spreads well, and has good hiding properties, but it does not work out well in some strong colors.

The interior wall finish that is being promoted today is the so-called rubber base paint. I believe many manufacturers are overstating the advantages of this paint. These paints are based on water emulsion of butadiene and styrene. More recently a few resinous materials have been added.

The rubber base paints have the following good points: They are fast drying and can be recoated in the same day; they produce little objec-

tion by the public from an olfactory standpoint; the film is very washable and can be readily touched up without showing laps. Some of the objectionable features are: The hiding power is rather deficient in the light tints; adhesion is poor over semigloss or gloss surfaces; there is spotty efflorescence where dampness is prevalent. Some of the earlier rubber base paints soured in the can and freezing ruined them. I would suggest that rubber base paint not be kept too long.

Today there is on the market an alkyd flat enamel. This often is spoken of as a *one coat* flat enamel. It is supposed to be self-sealing, odorless and quick drying. The alkyd vehicle used in this product produces a tight film that is washable and scrubable. Many paint chemists feel that this is the best interior wall finish that has been made for walls and ceilings.

ONE SOURCE OF TROUBLE

One of the commonest sources of trouble is when an interior wall finish is applied to a plastered wall. This is especially true if the plaster is fairly new. Whenever possible, it is well to let the wall stand at least six months and become thoroughly dry before the addition of paint. This is the surest way to obtain a reasonably good paint job on plaster. This done, a good primer sealer with some of the wall color in the first coat should be used. In this way a reasonably good job is obtainable with two coats of paint, provided a good resin emulsion or a good resin emulsion rubber base paint is used.

One of the most durable of the interior wall finishes is a good type of vehicle, probably of the alkyd family, with lithopone or some of the interior pigments in what is commonly called an oil flat paint. This paint is washable and durable. The durability varies approximately with the amount of sheen or gloss. For example, a semigloss paint ordinarily lasts longer and looks better than a dead flat wall paint does. By the same token, a high gloss enamel lasts longer and is more durable and washable than is a semigloss.

There has been a great improvement in enamels in the last few years owing largely to the quick drying varnishes used in making this type of paint. We all remember the advent of quick drying enamels, none of which seem to have the lasting qualities of the old enamels. The alkyds, to some extent,

have overcome this. We can now get the quick drying effect and a reasonable amount of lasting quality. Porch and deck paints are typical examples of the quick drying family. We have bought many of the best porch and deck paints on the market and painted porch floors and wood door steps with them and have had to repaint the same surfaces within six months or a year. To my mind, this is a sacrifice of quality for speed.

White enamels are largely used in kitchens, food handling places, creameries, bathrooms, shower rooms, and swimming pools. Perhaps the severest test for enamels around a college is in its bakeshop. The fumes from the baking process discolor white enamel in less than six months' time.

One of the most persistent and pernicious causes of failure in interior paint is mildew in a shower room, swimming pool, or any damp basement. We have gone to tile sidewalls and ceilings for shower rooms in order to eliminate this condition. Glazed tile is most satisfactory overhead when properly applied. Over a period of years it is far less expensive than continually painting and combating mildew.

ELIMINATING MILDEW

To eliminate mildew without tiling, the first operation before painting is to give the surface a thorough scrubbing with water, to which an effective detergent has been added; this will eliminate much of the surface discoloration. After that, we should wash the surface with a solution of bichloride of mercury in water diluted according to formula furnished by paint chemists. The bichloride of mercury dissolved in alcohol added to the paint is another method to keep down this fungus. Mercury compounds and chlorophenol still are the best agents to use. The strength of the solution depends upon the degree of contamination. Extreme care must be taken in handling the mercury compound. Workers should use goggles, and every precaution taken to prevent poisoning from this deadly chemical.

So far I have concentrated on paint, but now we shall consider how to apply it. In this connection, my remarks will be somewhat influenced by the procedure we use at Clemson College. Most of the painting we do is with a brush. Paint spray machines can be used satisfactorily on some classes of work, but not on high grade

interior painting and trim work. On large surfaces overhead and in unceiled roof areas supported by trusses, spray machines work well. But it is difficult to prevent particles of paint from getting where you don't want them when spraying residences, classrooms, dormitories, and all the better buildings where first-class painting is required. Spray machines are good for warehouses, barns, sheds and similar structures.

The expense of good brush bristles and our inability to get them from China has made the brush industry turn to nylon and a combination of nylon and cheaper bristle. The paint brush still has its use and will be with us for a long time.

The roller coater is gaining in popularity and usefulness and is being developed for different types of paint. The ones made of dynel with a thick pile enables one to apply paint on flat surfaces at a saving of at least 40 per cent on labor.

LABOR ON UNIT BASIS

Most of our paint labor is contracted on a unit basis, that is, we pay so much per square. We have a schedule of prices for exterior and another schedule for interior. In two-coat work, we pay more for the first coat than we do for the second. The reason for this is obvious. Not only is it easier to apply the second coat, but the scaffold, ladders and drop cloths are already on the job. In addition to this contracting for paint labor, we have several painters employed full time on an hourly basis; then, we have some carpenters who do some painting. This enables us to have a small repair job completed by one man rather than have to send a man of another craft back to do a job for only a few minutes.

Some institutions have been very successful in selecting a few of their janitors and training them to do painting during the summer season when school is not in session. This may not be practical now that wages are high and painters are scarce. Soon all janitors would be full-time painters.

Most failures of paint come about from improper application. The greater number of errors are the human ones rather than the physical. Those in charge of physical plants should acquaint themselves thoroughly with the best technical information available on paint and paint products and the best methods of application in current use.



Should We Let Them Paint Their Own Rooms?

CARL M. LEHMAN

Business Manager, Bluffton College, Bluffton, Ohio

PEOPLE DO NOT LIKE TO LIVE IN institutions, and dormitories at best are small institutions.

Why don't people like institutional life? Basically, it is because no two persons are alike. The shoe manufacturer recognizes this fact; he makes shoes in different sizes, shapes and colors. We managers of residence

halls do not always recognize individual differences. We paint all the rooms alike. Usually it is ivory or a mild gray or the color without color. Nobody likes such walls but then nobody hates them either, so we are safe.

In 1946 a few girls at Bluffton College asked the new business manager whether they could paint their

Since 1946, when a few girls asked for permission to paint their own rooms, students at Bluffton College have been allowed to do their own decorating, upon their request.

own rooms. They were sick of institutional ivory. The new business manager did not like ivory walls either, so he was sympathetic. The girls asked if the college would furnish the paint. The college decided to experiment. A plan was worked out whereby any student who wished to paint his or her own room could receive the necessary permission from the business office. There were a few restrictions: The color had to be approved; the paint had to have an oil base; the college would furnish the paint only if the room had not been painted the previous year. For a dollar deposit the college would provide a paint brush. This dollar would be refunded if the brush was returned cleaned or in such condition that it easily could be cleaned.

WHY WE AGREED TO PLAN

Those who think they know college business managers might surmise that the plan was adopted to save the cost of hiring professional painters. Such was not the case. Professional painters usually are worth their cost. We were, however, willing to gamble that these students would take greater pains on their own rooms than they would in painting a classroom or a hallway. One of the objectives of a college education is to develop creative self-expression. Why not let our students develop a little of it in their own rooms? Most of us know all too well what can happen to a professional paint job after it has been subjected to the usual "self-expression" of students for a year or two. Perhaps there was a better way. We could cater to their constructive rather than their destructive impulses.

So we decided to let the students paint. If the plan worked, it would save us money. The savings, however, would be incidental. Contrary to popular misconceptions, college business managers are not in the money saving business. They are in the money spending business, and they want to buy as much education as possible for their students.

The plan has been in operation for seven years. Our records indicate that during the 1952-53 school year more than one-third of the rooms in both men's and women's dormitories had been painted by students. At this rate theoretically all rooms would be painted every three years. This compares favorably with our usual practice of painting dormitory rooms every three to five years. We have found that some students actually select a room because it was not painted the previous year. This, however, raises a problem: what to do about the neglected rooms. We have become doubly cautious about painting dormitory rooms. We do not want to disappoint next year's student who may have selected his room because there was no question about his being given permission to paint it.

We knew that the plan was working. We also knew that sometimes the standards were not too high, particularly in the men's dormitory. We were not sure, however, just how well the students liked the plan or how well our objectives were being realized. So we decided to ask them. Last summer we sent each student a one-page questionnaire. Eighty-eight students responded, or more than 75 per cent. Of these, 52 had painted their rooms; 36 had not. We wanted the opinions of both groups, for we did not expect the same response from each. The difference, however, was not significant. In fact, when we asked the students whether they would like to see the practice continued the two groups differed by only 0.5 per cent. We found no great difference in the responses received from the men and women.

WHAT THEY TOLD US

The questionnaire asked whether the student felt that what he had learned about color selection had been worth while. Twenty-three per cent said it had been very much worth while; 52 per cent said it had been worth something, while another 23 per cent felt what they had learned had been worth little. On the other hand, 26 per cent felt that what they had learned about applying paint was very much worth while; 60 per cent felt that it had been worth something, and only 14 per cent felt that it had been worth little. On both questions the women were somewhat more enthusiastic than the men were. Even so, the men declared almost 2 to 1

that they had learned something worth while about color selection, and more than 3 to 1 that they had learned something worth while about applying paint.

We had hoped that painting their own rooms might stimulate the students to put more effort into other aspects of room decoration. Forty per cent said that it did just that. We also had hoped that it might stimulate them to take better care of their rooms and to keep them cleaner. Eighty per cent asserted that it did. Of these, more than half were enthusiastic enough to say that it made very much difference. All of the 52 students who had painted their rooms indicated that they had experienced a feeling of satisfaction in doing it. Twenty-nine of them said that they had experienced very much satisfaction from it.

ANSWERS SURPRISING

We asked the students whether the confusion and cluttering up of hallways and rooms while other students painted their rooms had bothered them. On this we received a real surprise. Fifty-six out of the 88 said "very little"; 29 said "some"; only two said "very much."

Did the smell of fresh paint annoy them? Sixty-five said that it bothered them very little; only 23 admitted that it bothered them some. Of these, only three were greatly bothered. Interestingly enough, of those who had painted 33 per cent were bothered, while only 15 per cent of those who had not painted were bothered.

A professional painter would have been critical of some of the results, more so than were the students themselves. Perhaps the students were not critical enough when only three of them said that the quality of work was poor. All the rest felt that they were doing either a good or a fairly good job. We asked all of them whether they would like to see the practice continued. Sixteen per cent said "very much"; 50 per cent said "yes"; 21 per cent said "makes little difference."

Then we asked students whether they would prefer having all dormitory rooms painted by the college during the summer months every three to five years as is customary in most schools. Eighteen per cent said, "I would much prefer it"; 23 per cent said, "It would make little difference to me," while 57 per cent said, "I prefer the present system."



Little doubt was left in our minds as to how the students felt about the plan. They were for it. But what about others? An outside examining committee stated flatly that it was false economy, yet the committee gave the girls' dormitory a high rating on the appearance of the rooms. The cost to the college was only about \$100 for the 26 rooms painted during the 1952-53 school year. Although it was never meant to be an economy measure, obviously there were some real economies in it.

The dean of men, a resident of the men's dormitory, has not been enthusiastic about the plan. He does feel that on the whole students have done a fairly good job of painting. The confusion and cluttering up of rooms and hallways while painting was going on is his chief criticism. The odor of fresh paint also disturbed him. As will be readily seen, the plan makes administration somewhat more difficult.

WOMEN'S DEAN ENTHUSIASTIC

The dean of women, a resident of the women's dormitory and a teacher of home economics, is more enthusiastic about the plan than is the dean of men. While she sees many advantages in summer decorating by professional painters, she is sympathetic to the objectives of the student decorating plan.

Paint manufacturers find that more and more persons are doing their own home painting. Our students are making an early adjustment to this trend. With a little care they can apply paint with reasonably good results, particularly when they use paint rollers.

We are experimenting with one of the new odorless paints this year, out of consideration for those who have found paint odors objectionable. We also are allowing the students a much wider choice of colors by letting them mix their own paint. They select their wall color from charts that give the amount of each pigment to be added to the white base.

Does anyone seriously question

The Need for Guidance Workers in College Residence Halls

THE COUNSELING POINT OF VIEW IS the counselee's point of view. Only by taking on the rôle of the counselee can the counselor comprehend his problems, his values, his goals, his frustrations, the totality of habits and attitudes that constitute his personality. And only by such comprehension can the counselor be an effective therapist.

Counseling is a joint project, a cooperative endeavor involving the counselor and counselee seeking answers. The counselor renders no value judgments concerning the actions of the counselee. Social values are recognized as constituents of the realm of fact. In response to a counselee's statement admitting an immoral act, for example, the counselor does not condemn or judge—at most he may point out that such an act is in violation of certain social values, parental wishes, religious dogma, or legal proscriptions.

Counseling operates most fruitfully on the assumptions of science: (1) There is orderliness in nature—things don't "just happen"—behavior is caused; (2) a single cause is inadequate to explain anything—any event can be traced back and back and back; (3) common sense is not reliable—nothing is self-evident—there often is more than meets the eye, and (4) there are no substitutes for facts.

Need for guidance workers in college dormitories, fraternity and sorority houses, and rooming houses. While "guidance" and "counseling" often are used interchangeably, a fairly common distinction exists between them. Guidance implies a general program of services designed to help students

solve their problems while counseling implies individual help in the solution of personal problems facilitated primarily through the interview. Thus guidance includes counseling.

So long as failing marks are given (and who can imagine a college without failing marks?), so long as some individuals are rejected by their peers, so long as there remain doubts about vocational choice, so long as there are unhappy romances, perhaps so long as there are colleges, there will be college students who need guidance and counseling.

Advantages of counseling in the residences, as opposed to that done in the usual counseling offices. Utilization of counseling personnel and facilities is directly related to the availability of the service and to the willingness of the counselee. The willingness of the counselee to seek such help depends in turn upon such factors as the counselor's reputation for helpfulness and his habitual respect for confidential matters, but, other things being equal, the nearer the service is to the need in both time and space the greater is the likelihood the service will be utilized.

Ideally the most desirable situation might be to have the most competent personnel immediately available to every student. Practically and financially it is perhaps most feasible to have complete centralization of such services. In attempting to preserve the merits of each approach it is suggested that the most competent persons available, with due regard for fiscal policy, be placed in the residence halls; that their counseling rôles be clearly limited and supplemented by a referral function as their capabilities warrant, and that such specialized personnel as medical and psychiatric specialists be maintained in a central-

ized agency. At the same time the residence hall personnel should be utilized according to their respective abilities rather than their being limited to those aspects of counseling that the least able is capable of handling. The college should take advantage of the features of nearness and availability.

Selection of residence counselors—sources of supply and criteria of selection. While professionally trained counselors and guidance specialists should be employed wherever possible, in most situations much of the staff personnel will have to be recruited from those without special training. The following criteria are suggested as desirable:

1. Residence hall counselors should possess the counseling point of view, the desire and ability to put themselves in the other fellow's place.
2. They should be conscientious and should be sincerely concerned with student lives and student problems.
3. They should have complete respect for student confidences.
4. They should possess adequate patience.
5. They should recognize their own inadequacies and function as referral agents.

In addition, it is suggested that preference be given to middle-aged married couples for either men's or women's units, thus representing as nearly a normal family relationship in the residence unit as is possible.

In my experience, an indispensable element in the successful operation of a residence unit is the effective utilization of student leadership. Since a leader by definition must be followed, the only reliable method of determining leaders in a group is the sociometric technic in which group members confidentially name their choices for positions of formal leadership. Thus

A condensed version of a paper delivered to the fifth annual conference of the National Association of College and University Housing Officers, August 1953.

If getting along with people is important, certain students will need guidance help in their social life

JOHN W. KIDD

Resident Adviser, Men's Residence Halls
Michigan State College, East Lansing



the real leaders may be discovered and appointed to positions of designated leadership with a title and remuneration. Having employed such an approach for four years in a men's residence hall of some 600 students, I am convinced beyond all doubt that this is the most important single criterion for selection of student guidance personnel.

Additional criteria should include: (1) marks and ability, such that the appointment will not constitute an intolerable burden; (2) acceptable behavioral record as revealed by schools, employers and references; (3) willingness to forego other employment and to reduce extracurricular participation to a reasonable minimum, and (4) constructiveness, cooperation and sincerity as opposed to destructiveness, disruptiveness and being hypercritical.

It should be recognized that high leadership status may be accorded an individual in a group who leads in unacceptable directions. Some check is therefore necessary as to the type of leadership exerted. This may be achieved by the use of references, especially current observers.

Once having discovered these most acceptable individuals, it may be desirable to recruit them either directly or indirectly. In my experience, it has seemed most desirable to have a current functionary mention in the presence of these individuals the availability of such appointments so that these individuals take the initiative in applying.

Counseling training and supervision. Whether in reference to staff personnel or student personnel, some preliminary orientation to the program is essential. The limitations on direct counseling, the referral function, the handling of violations of rules and regulations, the relations among per-

sonnel both of the counseling type and managerial, all of these should be clearly spelled out.

With the extensive housing program found at Michigan State, where a hundred or more such student functionaries are employed, each responsible for from 40 to 95 students, a special credit course in counseling has been inaugurated. In addition a series of orientation meetings is held during spring term before appointments are made for the ensuing academic year, and a two-day conference of the appointed personnel, both student and staff, is held immediately prior to the opening of school.

Evaluation of residence counseling. Evaluation implies two things: (1) measurement and (2) attaching values to such measurements. For example, one may measure how much the students in his class know about a particular subject but only the implication that knowing is good and not knowing is bad lends an evaluation aura to the undertaking.

Therefore, any program of evaluation implies goals or objectives, *i.e.* statements of desirability as opposed to undesirability. Until the objectives of the residence hall program are spelled out, no effective evaluation is possible.

Evaluation of one's attempts to achieve such objectives is a difficult business. The more superficial aspects often are readily observable but extreme error and misrepresentation in such measurement may occur.

A fairly satisfactory approach to the problem of residence hall evaluation is the confidential, anonymous student questionnaire used as a basis of comparing units, functionaries, years and so forth. However, you should avoid a common mistake in the use of ratings. Conclusions generally are uncertain ex-

cept those based on significant differences among like objects. For example, the average rating of food in one unit may be "F" and in another "C." You should not assume that anything can be done to improve the "C" rating. However, the evidence is such that you would do well to attempt an analysis of the differences between the units so as to try to improve the "F" rating, not because it is "F" but because it is, in a five-point letter scale, probably significantly lower than "C," while "C" is, in this case, demonstrably attainable.

To reinforce the point, suppose your friends or students were asked to rate you by using A, B, C, D, F on various personality traits and that your speech rating averages "B-." Can you assume that you are in their estimation superior to the average individual in this respect? No! Why? Because you do not know how they would rate the average individual. Actually they might rate only one individual in 20 as low as "B-." You cannot assume that they think you are that good or bad, only that they have so rated you and that it is relatively meaningless except in comparison with their ratings of you on other traits and of other people on the same traits.

Similarly misleading is the type of case in which each of three residence units is requested to report every violation of Rule X. During the year Unit A sends in 50 reports, Unit B sends in 20, and Unit C sends in three. What does it mean? On the face of it, one may flatly state that Unit A had most violations, Unit B second. As a matter of fact, such would be true only of reported violations. The actual violations may have been most numerous in Unit B or C.

To repeat, nothing is self-evident; common sense is not to be trusted; there are no substitutes for facts.

Three purposes are served in

Design of This Physical Education Building

NORMAN P. AUBURN

President, University of Akron, Akron, Ohio

THE DESIGN OF A STRUCTURE TO serve a threefold purpose confronted University of Akron officials and their architects in planning a new physical education building now under construction.

The building had to be planned to (1) provide physical and health education facilities, including a natatorium, for 3000 full-time men and women students plus an equal number of part-time and evening students; (2) accommodate 4000 spectators at intercollegiate basketball games, and (3) accommodate an audience of 5000 at ceremonial events such as collegiate convocations and commencement exercises and civic affairs.

A complicating factor was a restricted building site and, of course, the inevitable budgetary limitations. In this case the upper limit was \$1,400,000.

This structure is the first in a three-unit campus development program at Akron's municipal university. The other units are an \$800,000 arts and sciences building and a \$300,000 addition to the student building.

The building program is being financed as the result of a \$1,075,000 tax levy approved by Akron voters in 1951; capital gifts of \$1,200,000 obtained from 250 corporations and business concerns in the Akron area in 1952, and contributions from foundations and individuals totaling \$300,000 received in 1953.

Site restrictions are caused by the urban nature of the campus, which is located near the business section in a congested area. While such a condition is not conducive to the development of a spacious campus, the downtown location is a great convenience for the university's day and evening students, the majority of whom live in Akron and vicinity. As a municipal institution, the university's aim is to serve the educational needs of the city; its loca-

tion near the center of population is thus advantageous.

The educational plant occupies an area of 15 acres, representing two large city blocks. Adjacent peripheral areas, comprising five acres, are used for intercollegiate sports, for parking 1000 automobiles, and for auxiliary enterprises. Fraternity and sorority houses are located in close proximity.

Educational buildings are set back only a short distance from the streets, leaving an attractively landscaped open area in the center of the rectangular campus.

ACQUIRED WITHOUT LITIGATION

To acquire the site for the physical education structure, the university had to purchase 15 improved parcels of real estate and raze the dwellings erected thereon. Negotiations for purchase required about 18 months. All properties were acquired without litigation and without resorting to the right of eminent domain. The site included a city street which, when vacated, added a substantial amount of area to the purchased property. Excavation for the building revealed a substantial layer of shale over limestone rock, corroborating the test borings and providing excellent conditions for foundation construction.

The physical education building replaces one of the university's first structures, a gymnasium built in 1888. The new building includes on the main floor a large basketball court, 90 by 50 feet, which is a part of a men's gymnasium, 86 by 131 feet; an adjoining gymnasium for women, 80 by 50 feet; a permanent balcony seating on each side of the basketball court with folding bleachers bringing the total number of spectator seats to 4000, and an entrance lobby and offices for the staff. A lower floor contains a swimming pool, 37 by 77 feet; separate locker

and shower rooms for men and women students; special practice and exercise rooms; a student health service, 57 by 30 feet, and storage space.

The area above the entrance lobby on the balcony level accommodates three spacious classrooms for physical and health education instruction.

The basketball court is so arranged that the women's gymnasium at the south end, normally separated by motor operated folding doors, can serve as a stage area for ceremonial occasions. With folding bleachers removed, row chairs are placed on the playing floor to provide, with balcony seating, accommodations for approximately 5000.

Fully fireproof, the structure is of steel, concrete and masonry construction. Exterior facings are of Stone Creek Ohio gray brick and Indiana oolitic limestone. Gray Berea sandstone is used on all exterior steps. These materials are in keeping with those used on all newer buildings on the campus. Interior partitions are constructed of back-up tile, concrete block, glazed tile or smooth finished plaster.

Ceilings in all areas except the basketball court are suspended and acoustically treated. Lighting is recessed wherever possible. For maximum natural lighting, glass blocks are used in the swimming pool area and over the balcony in the basketball court.

Rubber tile is the floor covering in all areas above the ground floor except in locker and shower rooms, where terrazzo is used. Ceramic mosaic tile is used around the swimming pool. Mastic tile is the floor covering on all other ground floor areas.

Concrete roof decks are covered with built-up composition slag or gravel over insulation board.

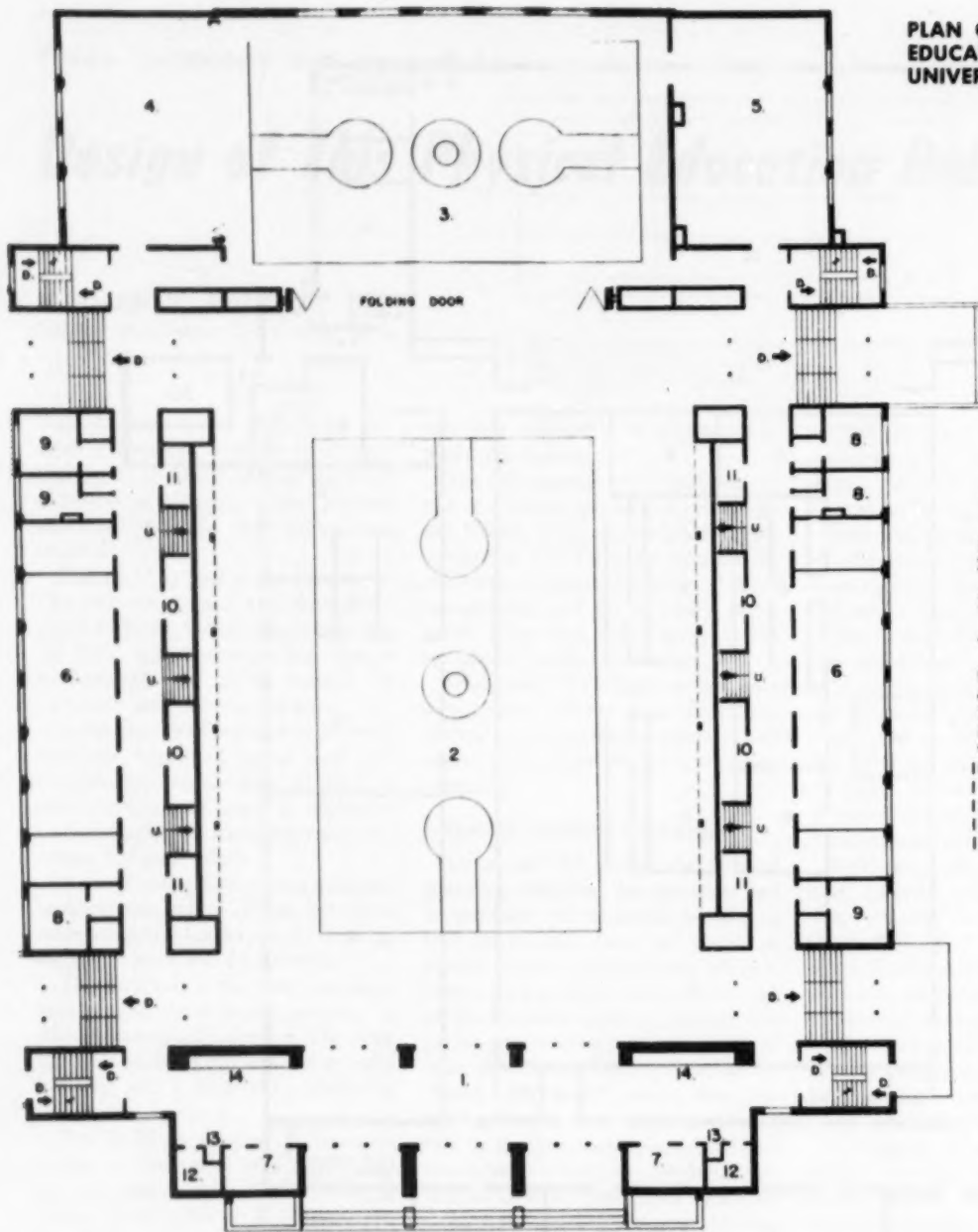
The structure is supplied with steam from the university's modern power plant. An auxiliary gas boiler is used for water heating in summer when the



SCALE 0 25 30 FEET

1. Equipment room	7. Men's corrective gymnasium	14. Bleachers	22. Dressing
2. Men's locker room	8. Team room	15. Women's toilet	23. Toilet room
3. Women's locker room	9. Storage	16. Men's toilet	24. Restroom
4. Women's showers	10. Team shower	17. Clinic	25. Nurse
5. Men's showers	11. W. shower & locker	18. Laboratory	26. Hairdrying
6. Women's corrective gymnasium	12. M. shower & locker	19. Dispensary office	27. Drying
	13. Five-lane pool	20. Doctor's office	28. Janitor's closet
		21. Examination room	29. Mechanical equipment
			30. Transformer

**PLAN OF PHYSICAL
EDUCATION BUILDING,
UNIVERSITY OF AKRON**



**KEY TO MAIN
FLOOR PLAN**

1. Entrance lobby
2. Men's gymnasium
3. Women's gymnasium
4. Dance instruction
5. Storage
6. Office
7. Ticket
8. Men's toilet
9. Women's toilet
10. Checking
11. Refreshment
12. Janitor's closet
13. Telephones
14. Trophy case

MAIN FLOOR PLAN

SCALE 0 25 50 FEET

power plant is not in operation. The ventilating system is central fan supply for gymnasium and the natatorium, with unit ventilation system for the various small rooms.

The over-all planning for the building includes the extension of utility tunnels to and from the structure, including the installation of steam and power lines of sufficient capacity so that these facilities will be available without alteration at the time the next building is erected. Wherever feasible,

campus walks are placed above the steam tunnel to facilitate snow removal.

The cost of the building follows:

General contract	\$993,000
Plumbing, heating and ventilating	267,600
Electrical work	80,470
Architects' fee	80,460

The cubic foot cost of construction, not including architects' fee, is \$0.87; square foot cost is \$17. Inasmuch as the structure includes a costly natatorium and has been designed as a

multipurpose building, university authorities considered the cost fair.

Allied Akron Architects prepared the plans. The consulting engineers are Frank Eroskey, structural; Paul B. Fleming, mechanical, and Paul C. Mehnert, electrical, all of Cleveland.

The structure will be known officially as Memorial Hall. Names of all residents of Summit County who lost their lives in World War II will be inscribed on six granite panels which will be placed adjacent to the main entrance.



THE NEW UNIVERSITY BOOK Exchange, located in the Memorial Union Building on the campus of the University of Oklahoma, has a typical "before and after" success story. One factor to illustrate this is the increased volume of business enjoyed during the store's first September over that of the previous September when the store occupied temporary quarters.

An unusual feature of the Book Exchange is the mobility of 80 per cent of the selling units. In a matter of minutes the store can be converted from partly self-service to clerk control. Mobility is stressed to facilitate the handling of traffic during rush periods.

All fixtures and units in the store were built in the department of physical plant under the direction of Walter W. Kraft, with Dewey Hoover as his assistant in charge of construction. During the normal selling period, the store is operated on a partly self-service basis. The portable counters with glass display bins occupy approximately one-third of the store. During the rush periods (September, February and June) tops are placed on these counters and they are clerk controlled.

Bins for notebooks and papers are located on the back of the trade book sections. During the rush period these units are turned around to separate the book and supply traffic. This places the trade books directly in view for all textbook customers.

Another important feature of mobility in the Book Exchange is the beautiful portable show windows. All mobile units in the store can be moved into the spacious windows that face all traffic on the ground floor of the Union. Permanent display cases are found in the textbook and engineering counters.

Slightly less than half of the 6000 square feet belonging to the Book Exchange is a large basement storage area. The two-level system is not a handicap, however. Supplies and books are conveyed to the retail level via small automatic lift, located in the rear



***From self-service to clerk control—
it's a matter of minutes in this***

BOOK EXCHANGE

SHIRLEY LYKINS

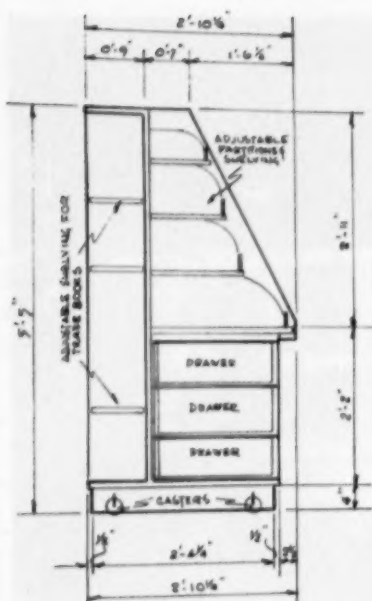
*Manager, Trade Book Department
University of Oklahoma, Norman*

of the textbook section or by large freight elevator. Incoming shipments are guided into a sliding chute going to the basement where conveyor-rollers channel the shipments to the designated storage areas. Separate rooms are maintained for books, art materials, and supplies. An up-to-the-minute stock control is kept on all items. When supplies are brought to the selling area, they are marked "sold to the store." This stock control is the point in which J. C. Mayfield, manager, takes the most pride. The system is

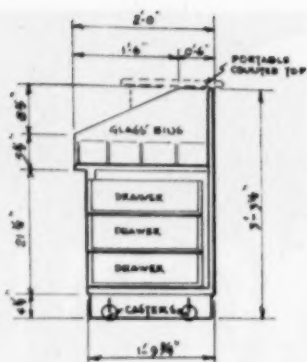
simple enough to understand and accurate enough for reliability.

The designed-for-efficiency theme is carried out throughout the store. Handsome modern fixtures, acoustical tile ceiling, air conditioning, inter-office communication systems, and piped-in music make the store outstanding. Prints from the Oscar B. Jacobson Folio of Indian Art are on permanent display. These prints are slanted downward above the display fixtures.

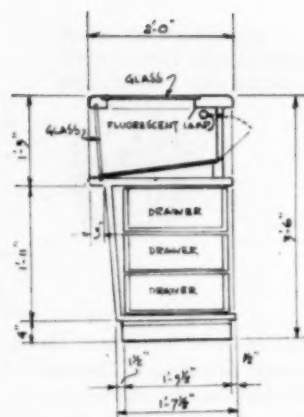
Since the Book Exchange is the publisher of many manuals, a wrapping



Sectional View of
Supply Unit for Spirals

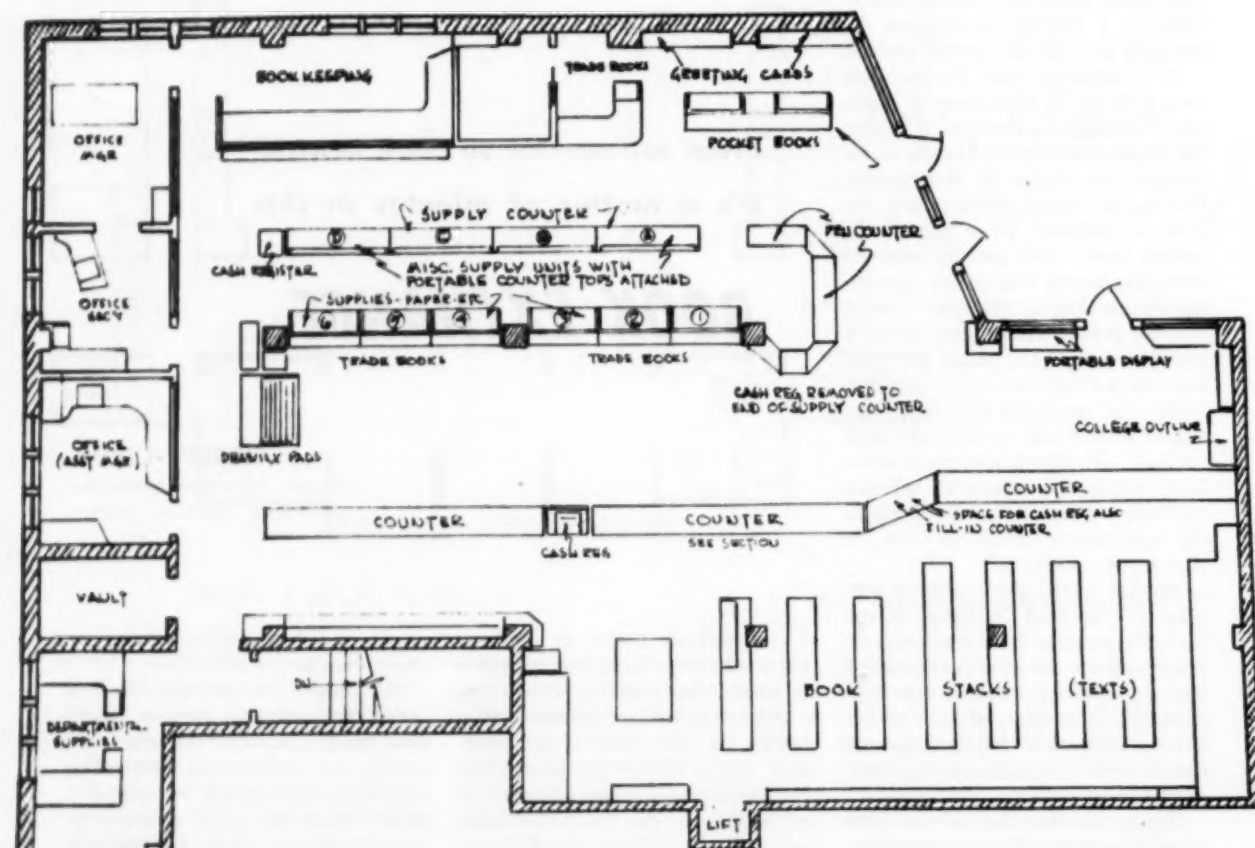


Sectional View of
Unit for Small Miscellaneous
Supplies



Sectional View of
Glass Top Display Counter

Below: Diagram of the University Book Exchange as it appears during the rush period. Trade books are now facing textbook customers, and they serve to separate the book and supply traffic. On the opposite page is diagram of the University Book Exchange during the normal selling period showing the portable counters placed back to back so that the students may serve themselves.



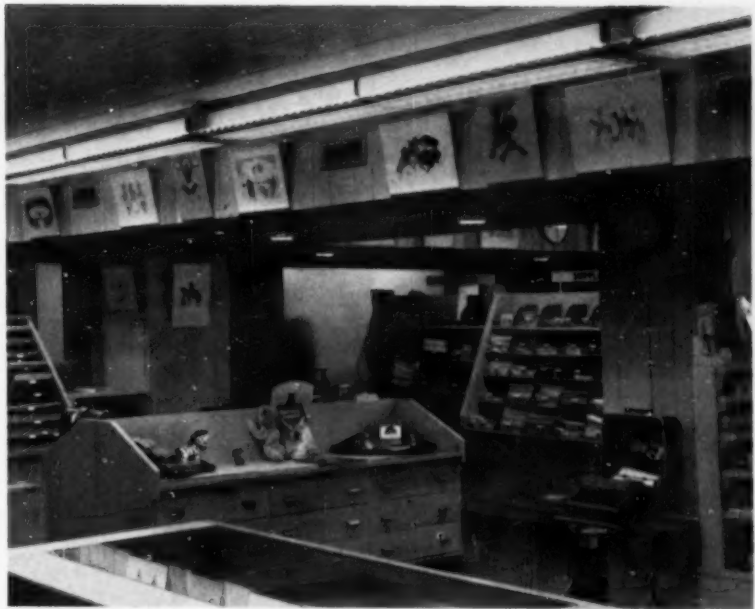
UNIVERSITY BOOK EXCHANGE UNIVERSITY OF OKLAHOMA

PLAN OF STORE DURING RUSH PERIOD - OPERATING ON A CONTROLLED SALES BASIS

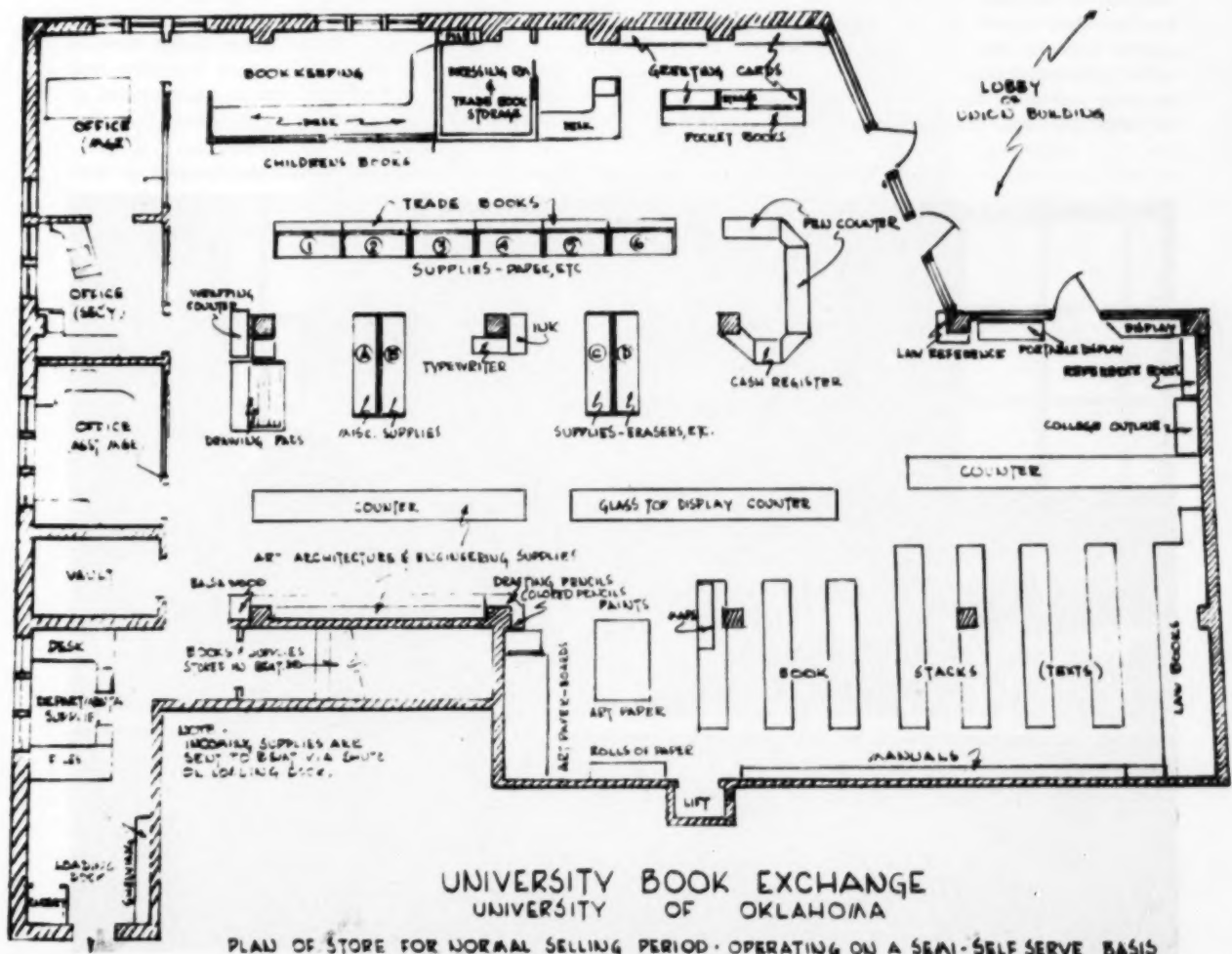
and mailing counter is located in the rear of the store. Students as well as employees of the university are permitted to use this service.

Particular emphasis has been placed on the trade book section. A complete sideline of gifts has been stocked for the students' convenience. "Since moving to our new location," says Mr. Mayfield, "our trade book department has expanded by leaps and bounds. The books are in the 'line of sight' from the front of the store. They are departmentalized as to the type of book. The nonfiction section is a growing concern and we have slanted the department in this direction because of our clientele. We have stocked the low priced 'series' books and have found them to be the most popular with the students."

Although the Book Exchange has an ideal location, no store can be successful without efficiency, and here is efficiency plus.



Photograph shows two of portable counters in normal period. During rush, tops are placed on them and they become clerk controlled counters.



Our Centralized Stenographic Bureau

results in uniform quality and style of work

and in a saving of time, money and equipment

BETTY E. MILLER

Manager, Stenographic Bureau, University of Omaha

"YES, DR. PAYNE, YOUR TEST WILL be ready tomorrow. You can pick up the Honor Society letters the next day."

Dr. Payne turned from the counter and strolled out of the stenographic bureau at the University of Omaha. The orders left by Dr. Payne represent two jobs of the more than a thousand handled each month by our stenographic bureau. The office turns out individually typed material, duplicated material, and even photo-ready copy for offset printing. Products include

examinations, routine notices, flash sheets, tickets, programs, letters and an ever growing array of special items.

Chief advantages of the stenographic bureau are those that come from specialization. "The centralized stenographic bureau," says Charles Hoff, vice president for business management, "involves specialization of personnel and space. This results in a more uniform quality and style of work and a saving of time, money and equipment." These advantages of

specialization, Mr. Hoff points out, have great importance in smaller colleges and universities. "Since we can seldom benefit from the economies of mass production within a department," he explains, "we need to save through specialization."

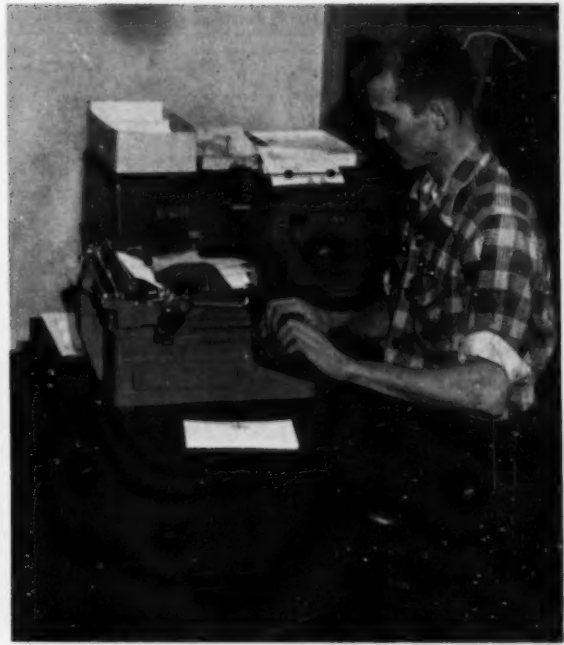
Another advantage of the bureau is its availability in time of emergency. Deans' offices caught short by vacations, sickness or a sudden rush of work can turn to the personnel of the stenographic bureau. This cen-

Charges are moderate at the University of Omaha's centralized stenographic bureau.





Betty Miller, director of the stenographic bureau at the University of Omaha, takes an order from a professor. The counter has the practical advantage of separating the reception area from the work area.



Student serves as attendant for the automatic typewriter. In background automatic typewriter handles form letters while attendant addresses the envelopes that will accompany them on a manual typewriter.



Student operates addressing machine. Approximately 20,000 pieces of mail are processed every month.

tralized supply of trained workers cushions the stress and strain that special projects bring to any university staff. The successful operation of this service has made it possible completely to avoid the hiring of private secretaries for faculty members.

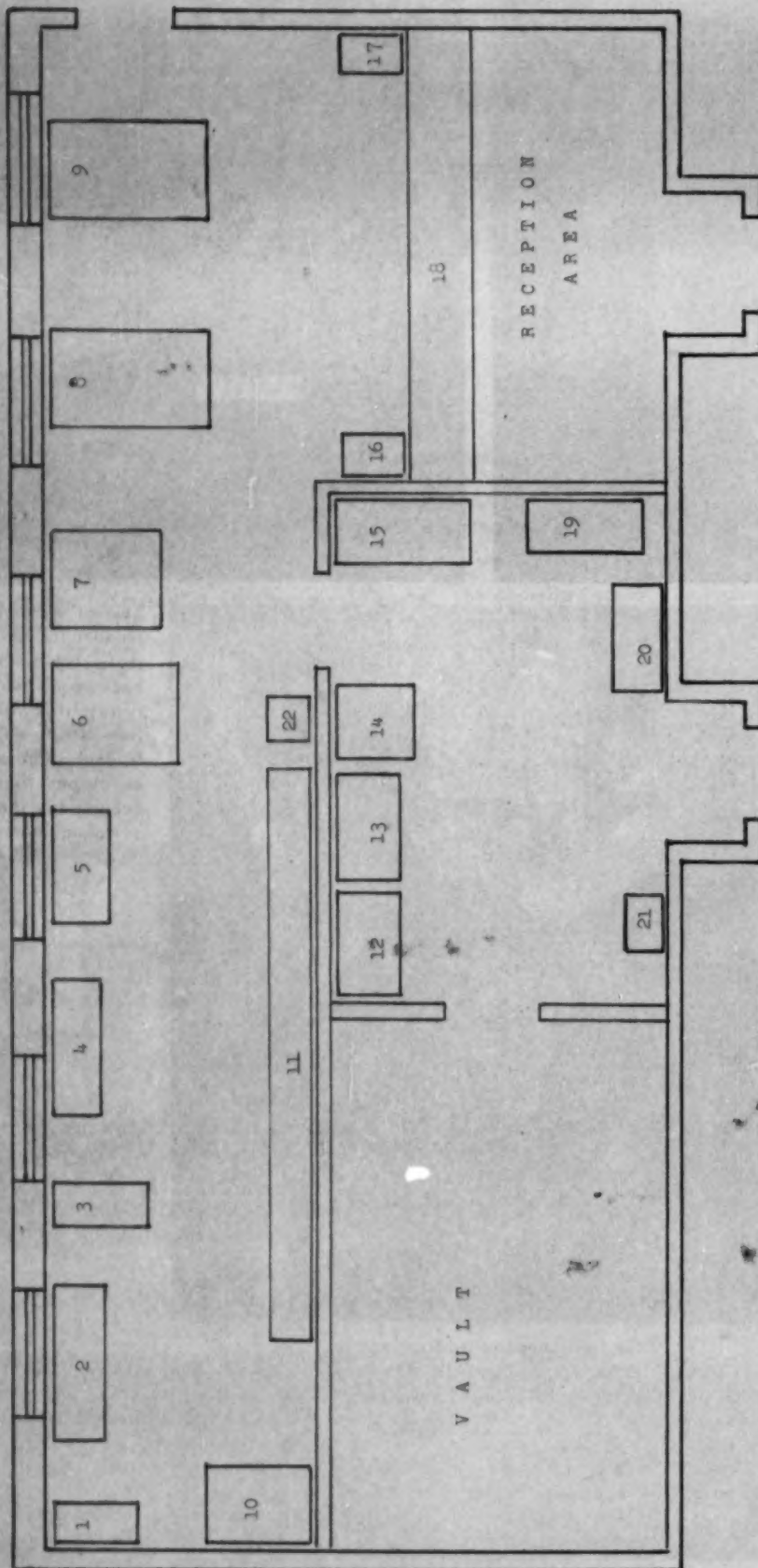
The stenographic bureau at the Uni-

versity of Omaha had its beginning several years before World War II in a letter writing service provided for members of the faculty. Under the

original plan, professors could visit the university business office and dictate correspondence to a stenographer available for that purpose.

When the university entered its new building in 1938, the stenographic bureau was assigned a room of its own. Addition of a duplicating machine

FLOOR PLAN OF STENOGRAPHIC BUREAU, UNIVERSITY OF OMAHA



KEY TO PLAN

1. Sink
2. Offset-free stencil duplicator
3. Folding machine
4. Stencil duplicator
5. Duplicator
6. Large cutter (manual)
7. Small desk
8. Desk
9. Manager's desk
10. Collator
11. Counter-height worktables
12. Addressing machine
13. File cabinet for addressing machine plates
14. Automatic typewriter
15. Files
16. Finished-work cabinet
17. Test cabinet
18. Counter-covered files
19. Auxiliary duplicator
20. Dictating desk
21. Record transcriber
22. Small cutter

made it possible to prepare examinations for members of the faculty.

During the war, reduction of departmental staffs forced more and more professors to turn to the centralized stenographic service. They found that they received a prompt, uniform quality of work at less cost. With this impetus and with the postwar rush of academic and administrative activity in communications, the stenographic bureau came into its own.

Purchase of new equipment, addition of new staff members, and enlargement of office space permitted the bureau to expand its operation. The bureau undertook such projects as processing university news releases, administrative forms, and reports. Installation of an addressing machine enabled the bureau to process mailings for alumni, general promotion, and adult education purposes.

BUREAU STAFFED BY FOUR

Today, the stenographic bureau has a staff of four full-time employees, including the director. The bureau uses part-time student help when needed, but schedules the same students regularly for work. This again takes advantage of the savings of specialization.

The bureau has 960 square feet of office space, which includes a reception area with counter, two workrooms, and a storeroom. The bureau uses the following major equipment: typewriters (manual, electric, and electric with carbon ribbon attachment), automatic typewriter, duplicator, stencil duplicator, heavy duty paper cutters, heavy duty staplers, folder, addressing machine, and cabinets for addressing machine plates.

Let's examine in detail now the services of the centralized stenographic bureau. It accepts copy in four forms: verbal (to be taken in shorthand), recorded, handwritten and typewritten.

Professors and administrative officers may drop into the bureau and dictate their material there. Or a stenographer may be sent to the individual professor's office to take the dictation. Because the bureau's charges are based on the cost of material and time and because verbal delivery of copy tends to be time consuming, this service is not often used.

The bureau processes only a limited amount of recorded dictation. The typed material is generally returned to the customer within 24 hours.

In accepting either handwritten or

typewritten copy, the staff of the bureau looks first for clarity. Tactful handling of the idiosyncrasies of individual professors becomes an important factor here. Another problem involves the need to avoid symbols (such as some of those in mathematics and chemistry) that are not on typewriters. Ingenious professors have come up with a number of substitutes.

Flexibility is an important element in the stenographic bureau's service. The bureau attempts to follow (1) a uniform style of correct usage, and (2) the original copy. But the bureau is not rigidly bound to either of these standards. If the standards differ, a member of the bureau checks personally with the office or professor involved. The item in question is then confirmed or modified.

The stenographic bureau turns out copy in one of five different forms: (1) individually typed, (2) photo-ready typed, (3) auto-typed, (4) stencil duplicated, and (5) duplicated.

1. Individually typed copy consists primarily of correspondence prepared for members of the faculty and administration. All recorded material is individually typed.

2. The carbon ribbon electric typewriter finds its main use in the preparation of photo-ready copy for offset printing. Chief advantage of an electric typewriter for this sort of work is the evenness of strokes. Preparation of the copy within the university rather than by a commercial firm saves time and money and reduces chances of error. The alumni office, with its monthly newsletter and frequent special mailings, makes greatest use of photo-ready typed copy.

3. Form letters that need to be personalized usually are "auto-typed." The automatic typewriter works like a player piano. Once a cylinder, corresponding to a player piano roll, has been punched for a specific letter, the machine automatically types as many letters as are desired. The attendant can operate the machine manually to personalize each letter as it comes through. And the attendant is also free long enough—depending on the length of the form letter—to address envelopes or perform other tasks on a near-by manually operated typewriter.

4. Occasionally, form letters are stencil duplicated and then personalized. However, this operation does not yield quite such a perfect copy.

The stencil duplication process also is called upon in the preparation of such items as flash sheets, handbooks, reports, and office forms for use within the university. The stenographic bureau mimeographs runs of up to 2500 copies; frequently it is less expensive to have longer runs printed.

5. Students have their greatest acquaintance with duplicated material. Inexpensive and good for runs of up to 200 copies, this process is used almost entirely for examinations and routine notices. Only nonstudent employees handle examinations. Such material is kept in a locked cabinet (except while being processed) from the time a professor delivers it until he picks up the finished copy.

The stenographic bureau maintains a file of stencils and a sample of each item it turns out, except for examinations and other confidential material. This file contains all items prepared during the preceding two years and provides a much used reference source for students, faculty members, and administrators eager to know what has been done before and how.

SOME REQUIRE SPECIAL SERVICES

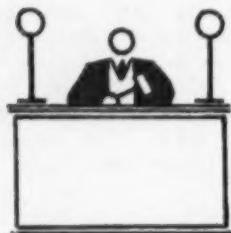
Most copy, once it is typed or duplicated, is ready for use by the individual or office that requested it. Some copy, however, requires special services. Tickets need to be trimmed and numbered, programs folded, and reports stapled. And large mailings may need to be addressed by machine.

The stenographic bureau's addressing machine department stores more than 20,000 plates. These include the plates of 4000 alumni, 3100 high school seniors, 3500 community citizens, 6000 adult education students, and numerous vocational and special interest groups. The bureau processes mailings prepared by both the bureau and by outside printers.

Financially, the bureau presents a two-part picture. Funds for such direct expenses as salaries and supplies (paper, ink, stencils) come from the stenographic bureau revolving fund. This revolving fund is maintained through fees charged other university departments for specific jobs.

The bureau also charges a fee to cover cost of material and time for each job that is undertaken. Typical charges are: duplicating 50 copies of a two-page examination, \$1.20; auto-typing and personalizing 75 one-page form letters, \$7.50; addressing by machine 4000 mailing pieces, \$3.

Charitable Bequests Should Be Drafted With Great Care



T. E. BLACKWELL

Vice Chancellor and Treasurer
Washington University, St. Louis

A. C. McLAUGHLIN WAS BORN IN 1876 and lived during his childhood in Austin, Tex. His father, Dr. James W. McLaughlin, for many years was a professor in the University of Texas School of Medicine and also served as regent of that university. In 1907, Mr. McLaughlin became a resident of the state of California, where he remained until his death in 1952.

The following is an excerpt from his unwitnessed will, written in his own handwriting, a month before his death:

"I bequeath all other property of which I die possessed to the School of Medicine University of Texas to establish and maintain fellowships to be known as the James W. McLaughlin Fellowships for the investigation of infection and immunity."

During his lifetime the testator had acquired valuable oil and gas properties in the state of Colorado, and it became necessary to file the will for probate in Colorado as well as in California. The three surviving adult children of the testator consented to and supported the terms of the will, but it was necessary for the court to appoint a guardian ad litem for two minor grandchildren. The guardian challenged the validity of this will on several grounds, including the contention that "the 'School of Medicine University of Texas' is not a legal entity capable of taking a gift."

The issue was carried to the supreme court of Colorado and in its opinion¹ dated Jan. 11, 1954, the court disposes of this contention as follows:

"We find no merit in this argument and are content to direct attention to the opinions of our court in the following cases in which similar arguments

¹In re McLaughlin's Will, 265 P. 2d. 691.

under comparable factual situations have been held insufficient to void a devise of property. *Galiger v. Armstrong* 165 P. 2d 1019, in re Estate of Schleuer, 13 P. 2d 273.

"The University of Texas is a legal entity for which the constitution of the state of Texas provides, as follows: 'The legislature shall as soon as practicable establish, organize and provide for the maintenance, support and direction of a university of the first class, to be located by a vote of the people of this state, and styled "The University of Texas, for the promotion of literature, and the arts and sciences, including an agricultural, and mechanical department."'

"The supreme court of Texas has identified the School of Medicine with the University of Texas in *Foley v. Benedict*, 55 S.W. 2d. 805, 86 A.L.R. 477, from which we quote: 'The School of Medicine at Galveston is a school in and is a part of the control and management of the board of regents of the University of Texas.'"

The supreme court of Colorado, in its decision referred to in the foregoing opinion, *i.e.* *Galiger v. Armstrong*, makes the following pertinent statement:

"It is probable there is no branch of the law governing charitable devises and bequests that has provoked more critical discussion or given rise to so great a divergence of opinion and lack of uniformity in court decisions, as the questions concerning the certainty with which the purposes of the trust must be stated or the beneficiaries designated. By our pronouncements in *Clayton v. Hallett*, 70 P. 429, 59 L.R.A. 407, nationally accepted as a leading case in this field, this jurisdiction is committed to what is called

'undoubtedly the better view' in 10 Am. Jur., p. 643, §82.

"Such, in effect, also was made the statutory law of Colorado by subsequently promulgated section 1, chapter 195, S.L. 1927, §184, C. '41, '35 C.S. 19, which provides that no devise or bequest for an educational or charitable use 'which shall in other respects be valid under the laws of this state shall be deemed invalid by reason of its indefiniteness or uncertainty of the persons designated as the beneficiaries thereunder in the instrument creating or constituting the same.'"

A review of these cases emphasizes the need for the use of great care in the drafting of charitable bequests. If Mr. McLaughlin had employed an attorney to assist him in the preparation of his will, he would have informed him that the School of Medicine of the University of Texas is not a legal entity, capable of receiving and administering a charitable bequest. In order to ascertain the precise legal designation of the corporate entity of the institution in question, it is usually desirable to consult the charter or legislative enactment creating the corporation. The more precisely the corporate entity is identified in the will, the less probability of litigation on the subject. Many colleges and universities publish in their catalogs the correct legal designation of the institution, to be used in the drafting of bequests. This is commendable.

There has been considerable litigation on the question as to whether certain state colleges or universities are, in fact, corporate entities. In 1876, the State University of Iowa was held² to be merely an agency of the state and not a corporation, and the Kansas State Normal College at Emporia was also declared³ to be non-corporate in 1891. A state normal school in North Dakota was denied corporate status in 1903,⁴ and apparently all tax supported institutions in that state are considered to be merely instrumentalities of the state itself and not corporations.⁵

²*Weary et al. v. State University of Iowa*, 43 Ia. 335.

³*State ex rel. Board of Regents of State Normal School v. Stover*, State Treasurer, 27 P. 850.

⁴*State ex rel. Board of University and School Lands v. McMillan*, 96 N.W. 310.

⁵*Elliott, Edward C., and Chambers, M. M.: "The Colleges and the Courts." The Carnegie Foundation for the Advancement of Teaching. New York, 1936. p. 122.*

WHO CAN CLEARLY DEFINE ROUTINE maintenance so that the term means the same to everybody? The degree to which food service equipment is maintained depends on the philosophy of each accountable individual.

For our operation at Michigan State College, we have proposed the following objectives as a guide in setting up a maintenance program:

1. Maintain food service equipment at maximum efficiency.
2. Increase the longevity of this expensive equipment.
3. Reduce repair bills.
4. Decrease breakdowns during peak-load operation.
5. Improve the appearance of equipment to promote better working conditions.

The fulfillment of these objectives necessitates thorough organization of a program.

Maintenance of food equipment must become a regular practice like washing our hands and brushing our teeth. Employees responsible for equipment upkeep have to cultivate these maintenance habits. To do so, the employee must have desire. It is the job of supervision to help him acquire this desire because the employee must be cast in the starring rôle if the maintenance program is to be successful.

It is inherent in every person to want to do a good job, to take pride in his work. Dostoevsky wrote: "If it were desired to reduce a man to nothing, it would be necessary only to give his work a character of uselessness." The easiest way to squelch desire, to promote an atmosphere of uselessness, to deride pride, is to set up and maintain a faulty communication system between supervisor and employee.

To mold the attitude of the employee toward achievement of proper maintenance habits we must communicate our thoughts clearly, concisely. For each maintenance operation we must: (1) explain the reason for performing it; (2) give thorough detailed instruction, and (3) allow discussion.

PROGRAM—PART I

The easiest way, in my opinion, to follow these routine maintenance prerequisites is by group discussion. Explanation of a particular maintenance operation is followed with a demonstration of the technic involved. After a discussion of the merits of this technic, the employees utilize the information on the spot in their well equipped laboratories—the kitchen,

Setting up a maintenance plan for

Food Service Equipment

ROBERT TELDER

College Sanitarian, Michigan State College

dishroom, bakeshop and so forth—under adequate supervision.

Furthermore, it is common in many universities and colleges to have staff meetings for various functions such as residence hall management, food service supervision, residence hall maintenance supervision. Policies and problems inherent to each particular area are discussed. Does it not follow, then, that meetings for food service employees are equally important?

Employees experience pride and dignity in meeting as a unit, an entity, a recognized part of the whole. Interest and desire are furthered to the point that outmoded or sloppy maintenance procedures can be replaced with new, sound habits without opposition, without compulsion.

Employees will feel that they have proposed new policies, which they have to a great degree. I cite an example: The need for an acceptable, standardized dish machine maintenance procedure was presented. A chart was suggested. With guidance, the group made one which was to the point, brief, attractive and easy to read. When these charts were eventually posted, the employees were not in the dark about the change in procedure and a feeling of accomplishment was prevalent. A habit was forming.

Supervisors should attend all meetings for two reasons: (1) It is imperative that they know what material is being discussed; (2) employees must feel that their interest is shared by their supervisor.

PROGRAM—PART II

Because of the continual improvement in equipment design and labor saving features and the advent of machines to supplant manual labor, many

food service operations have become highly complicated. By the same token, maintenance procedures also have become more complicated. If equipment is abused, it is not going to operate at maximum efficiency. It then follows that more man-hours are used up for a particular operation than should be necessary. Also, if the equipment breaks down from misuse, considerable man-hours are required to do the same operation manually.

Because many employees do not have a natural mechanical aptitude and do have an intrinsic fear of adjusting mechanical equipment, there are, in my opinion, a number of necessary routine operations, such as setting chopper blades, refinishing potato peelers, lubricating, and repacking packing glands, that fall outside their talents.

ONE MECHANICALLY CAPABLE

One full-time person, mechanically capable, should be better able to develop a proper preventive maintenance program into a regular routine than can ordinary food service workers, who have been hired for their other capabilities. Nevertheless, food service employees still must be responsible for the disassembly, cleaning, sanitizing and assembly of their equipment.

The fact that one person is responsible for the mechanics of preventive maintenance alleviates stocking duplicate tools, spare parts, and special lubricants in a number of units.

A few suggestions are listed as a guide for setting up a perpetual routine maintenance program.

1. Inventory all food service equipment and post the pertinent data on life cost record cards.

2. Contact all the companies from which equipment has been purchased

and request operation and maintenance manuals. Keep them in a central file.

3. Stock the recommended greases and oils at a central point.

4. Standardize all grease fittings.

5. Give one person, with a natural mechanical aptitude, the responsibility of inspecting every single piece of equipment at least once a month. Certain pieces of equipment require attention oftener than this.

6. Have this person: (a) lubricate all kitchen equipment with the proper oils and greases; (b) sharpen and set blades correctly; (c) tighten valves and change packing; (d) refinish potato peelers; (e) replace steamer gaskets; (f) recommend that certain parts be repaired or replaced during the regular downtime, *before* the part is completely worn out.

7. Post on life cost record cards the materials and labor cost for each

repair. These figures can be used as a guide when buying new equipment.

8. Restock minor parts and lubricants as they are used up.

A maintenance inspector, on his initial calls, found some startling misuse of equipment. Some instances are:

1. A glass washer was operating without thrust bearings. This caused undue wear on other parts.

2. The wrong type of gland packing was being used on a glass washer, which was continually becoming inoperative. The manufacturer's recommended packing alleviated this.

3. A dish machine was using a gear box oil that was detrimental to the gears. The excessive wear on the gears was eliminated by changing to the specified lubricant. I make this point: before our program, the natural impetus and organization for desirable maintenance was latent. No one read the

maintenance manual thoroughly. No one knew the gear box needed a special type of lubrication.

4. The peeling time for a load of potatoes was reduced from 20 minutes to 3 minutes on three potato peelers.

5. While re-positioning food chopper blades for optimum efficiency, a broken blade was observed which might have caused a serious accident.

6. A switch box for a piece of equipment requiring 220 volts for operation enclosed some uninsulated wires. The box was half filled with water. The electricians were amazed that no one had received a "jolt." New wires were installed and the box was relocated.

Routine maintenance must be performed willingly to be effective. It must be organized. It must be perpetual. A proper program will pay dividends in big dollars.

PROGRAM OF 1954 COLLEGE FOOD SERVICE INSTITUTE

Delegates planning to attend the 1954 College Food Service Institute July 12 to 14 in Chicago, under the sponsorship of College and University Business in cooperation with Northwestern University and the University of Chicago, should send registration checks for \$17.50 immediately to Food Service Institute, College and University Business,

919 North Michigan Avenue, Chicago 11, Ill. Harold W. Herman, editor of College and University Business, will make hotel reservations for delegates at the Hotel Knickerbocker, Chicago. Delegates should advise him as to date and time of arrival in Chicago so that hotel accommodations will be ready.

MONDAY, JULY 12

General Organization

9:30—Opening remarks, Stanley R. Clague, vice president, the Modern Hospital Publishing Co., Inc.

9:35—Principles of Residence Hall Food Service Operation, Sylvia Hartt, assistant professor of institution management, Purdue University.

10:00—Discussion

10:20—Educating the Business Manager, Elmer Jagow, business manager, Concordia Teachers College.

10:45—Discussion

11:00—Basic Administrative Skills, Raymond W. Kettler, business manager, Purdue University.

11:25—Discussion

Special Projects

2:00—Contract Feeding by Concessionaire, Reed Andrae, Nationwide Food Service, Inc.

2:30—Discussion

2:45—Special Catering Makes Friends and Profits, Lenore Sullivan, department of institution management, Iowa State College.

3:15—Discussion

3:30—Scheduling Summer Conferences, R. A. Hawk, treasurer, Grinnell College.

4:00—Discussion

TUESDAY, JULY 13

Purchasing

9:00—New Ideas in Food, Dr. Donald Tressler, scientific director, Food & Container Institute of the Armed Forces, Chicago (tentative).

9:45—Discussion

10:00—Should a Purchasing Agent Buy Foodstuffs? Clint Johnson, director of service enterprises, University of Minnesota.

10:30—Discussion

10:45—What's New in Food Service Equipment? Jim McKellin, director of food service, Wheaton College.

11:15—Discussion

Problem Clinic

Presiding: Irene Boelts, assistant to the food service director, University of Chicago.

2:00—Gracious Living, Ruth Donnelly, housing supervisor, University of California.

2:30—Discussion

2:45—How to Establish a Job Training Program, Kathryn Bruce, educational director, National Restaurant Association.

3:15—Discussion

3:30—Large school clinic and small school clinic.

WEDNESDAY, JULY 14

Personnel Training

9:00—Selection and Training of Personnel, Martha McBride, administrative assistant to the director of residence halls, Indiana University.

9:30—Discussion

9:45—Developing a Working Manual, Scott Wilson, principal food service manager, University of California.

10:15—Discussion

10:30—Working With Union Labor, Donald E. Dickason, director of nonacademic personnel, University of Illinois; Joseph Nye, director of residence halls, Columbia University.

11:15—Discussion

11:45—Luncheon at Jacques French Restaurant.

Cost Control

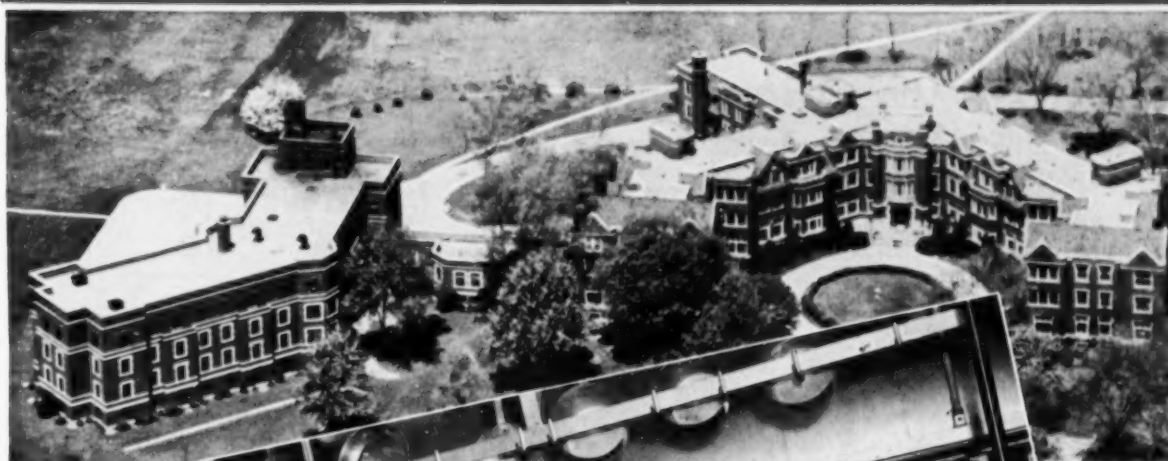
2:00—Safety in the Kitchen, Hilda Watson, chairman hotel and restaurant department, City College of San Francisco (tentative).

2:30—Discussion

2:45—Simplified Food Cost Accounting Records, Douglas Osterheld, associate director, the Wisconsin Union, University of Wisconsin.

3:15—Discussion

3:30—General summary and question box.



The Presbyterian Home, Evanston, Ill.

Sexton
Quality Foods

Elegantly convenient

In food service to the aged and convalescent, Sexton paper plates, cups and napery meet every need for sanitation, convenience and good taste. Increasing thousands of restaurants, coffee shops and cafeterias which require a service economical and distinctive depend on Sexton for paper goods. Huge stocks, complete assortment, and speedy service assure prompt supply of every need—whether strictly utilitarian or elegantly de luxe.

JOHN SEXTON & CO., CHICAGO, 1954

NEWS

Claims Monopoly in Research Grants . . . Jewish Congress Charges Bias in College Entries . . . Segregation Cases to Be Reexamined . . . Withdraws Offer to Ousted Professor . . . Drops Warsaw Grant . . . Build Interfaith Center

Dartmouth Fraternities Must End Restrictions

HANOVER, N.H.—Trustees of Dartmouth College have given fraternities six years to rid themselves of membership restrictions based on race, religion or national origin. President John S. Dickey reported that the trustees took the action by approving an undergraduate recommendation made in a campus referendum. The students had voted overwhelmingly in favor of ordering the fraternities off the campus if they had not eliminated the nationally imposed restrictions by 1960.

Only a handful of the 23 fraternities on the campus have the "objectionable" clauses, it was reported. One chapter has resigned from its national body and dropped the clauses. Another chapter dropped the clauses but stayed affiliated with the parent organization.

Charges "Cartel" System in Research Grants

CHICAGO.—A dangerous monopoly is developing in regard to the granting of research funds to the colleges and universities by the federal government. So declared Dr. Karl E. Ettinger at a recent meeting of the National Catholic Educational Association. Dr. Ettinger is research consultant on the staff of the Commission on the Organization of the Executive Branch of Government headed by former President Hoover.

According to Dr. Ettinger, the sum of \$350 million was granted last year by the government for research through the colleges. Of this amount Harvard, Columbia, the University of Chicago, Massachusetts Institute of Technology, and California Institute of Technology received 55 per cent.

Although 700 institutions of higher education have the necessary capacity to do research, only 225 have received

contracts, Dr. Ettinger reported. Ninety-one per cent of the government grants went to 50 colleges.

Seeking the cause for the research pattern, Dr. Ettinger found that a high degree of interlocking directorates exists among the foundations, the favored institutions, the National Science Foundation, and the research advisory boards of the Defense Department.

"We have here all the earmarks of a trust or cartel system of higher education," Dr. Ettinger declared. "It is comparable to the interlocking directorates in industry, which have long been recognized as opposed to public policy."

Nevada Leads in per Cent of First-Time Students

RENO, NEV.—The University of Nevada led the nation during the present school year in percentage of students enrolling in college for the first time.

Nevada's first-time enrollment percentage was 25.7, or 435 students as compared to 346 last school year. Of the 38 states reporting increases in first-time students, Pennsylvania was second with 18 per cent.

Nevada reported that its total number of new students—which includes freshman, transfers and graduate students—is on the increase. For the present school year, the number is 635 as compared to 609 last school year and 569 two school years ago.

Teaching Outpays Business

EVANSTON, ILL.—Teaching pays girl graduates more than business jobs pay, according to a recent study by the National College of Education. New teachers get an average of \$3200 for a 10 month year with business reporting an average of \$2904 for a 12 month year with two weeks' vacation.

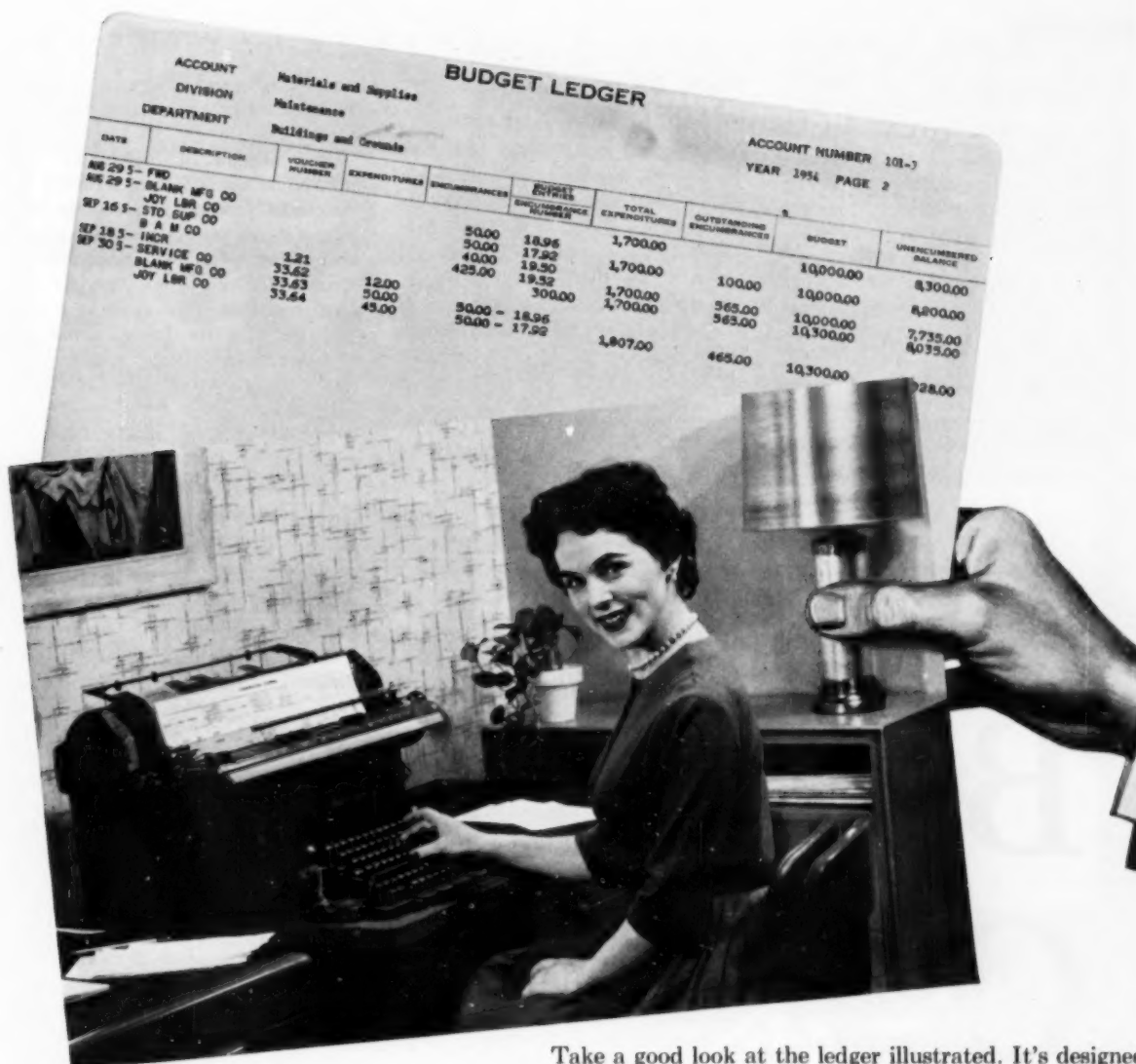
Supreme Court Sends Back College Segregation Cases

WASHINGTON, D.C.—The U.S. Supreme Court sent three racial segregation cases back to lower courts with orders that they be reexamined in the light of the historic ruling of May 17 in which public school segregation was declared unconstitutional. Included in the segregation cases were those referring to universities and colleges.

The order by the Supreme Court instructed the Florida court to reconsider its refusal to order four Negroes admitted to the University of Florida, and it instructed the U.S. circuit court to reconsider the case of a Negro seeking admittance to Louisiana State University.

In the Florida case, four Negro students applied on April 4, 1949, for admission as graduate students to the University of Florida at Gainesville. Florida offered the Negroes out-of-state scholarships equal to those available at tax supported Florida schools, but they refused the offer. A Florida court then ruled that the offer was not satisfactory. The court held, however, that an offer to provide instruction at the University of Florida until equal facilities were available at the Florida Agricultural and Mechanical College for Negroes did protect the Negroes' rights under the Fourteenth Amendment. In May 1952, the Negroes filed a writ to compel unqualified admission to the University of Florida. The state supreme court quashed the case on the ground that the Negroes had failed to submit proof that facilities at the Agricultural and Mechanical College were unequal to those at the state university.

In the Louisiana case, Alexander P. Tureaud Jr. applied for admission to Louisiana State University to take a combined course in arts, science and the law. When admission was refused,



*Here's the right form
... the right machine
... for effective
Budget Control*

Take a good look at the ledger illustrated. It's designed by Burroughs for convenient and informative reference . . . to provide up-to-date reports with simple, fast, accurate machine operation.

Get a demonstration of the Burroughs Budgetary Accounting Machine, and you'll be impressed with its simplicity of operation . . . speed in posting. What's more, it mechanically prevents posting errors caused by the operator's picking up previous balances incorrectly.

Burrough's special booklet on streamlining accounting and management reports is packed with helpful information on how the Burroughs Budgetary Accounting Machine simplifies preparation of the Budget Ledger as well as all other accounting operations. Just contact your nearest Burroughs branch, listed in the yellow pages of your telephone directory. Or write Burroughs Corporation, Detroit 32, Michigan.

WHEREVER THERE'S BUSINESS THERE'S

Burroughs



his father brought suit. Mr. Tureaud Sr. asked that a three-judge statutory court be convened to hear the case. Federal Judge J. Skelly Wright refused to call a three-judge court, but enjoined the university from refusing to admit Negroes to the combination course. The case of Tureaud, who had been admitted to the university after Judge Wright's ruling and dropped after the appeals court set aside the injunction, was appealed to the Supreme Court.

Finds Discrimination in Scholarship Awards

NEW YORK.—A study of 1347 New York State scholarship winners who sought admission to colleges revealed that "Catholic and Protestant high school graduates have a higher acceptance rate than Jewish students." The report, released after four years of study and preparation by the American Jewish Congress, declared that such discrimination could not be explained

by any difference in grades, extracurricular activity, residence or other factors.

Will Maslow, director of the commission on law and social action of the American Jewish Congress, declared that in the survey the combined acceptance rates were 97.6 per cent for Roman Catholic applicants, 97 per cent for Protestant applicants, and 84.7 per cent for Jewish applicants.

A significant finding was that the public colleges operated by New York City accepted all applicants in the scholarship group regardless of religion or ancestry.

Cornell Withdraws Offer to Ousted Teacher

ITHACA, N.Y.—Dr. Lloyd H. Elliott, head of the summer session at Cornell University, recently announced the university had withdrawn an offer to Dr. Harry C. Steinmetz to teach at Cornell this summer. Dr. Steinmetz, dismissed San Diego State College professor who refused to tell a congressional committee if he was or had been a Communist, had said in San Diego recently that he had been hired by Cornell for the summer and termed the hiring an "academic vindication."

Speaking for Cornell University, Dr. Elliott asserted that "in view of all the circumstances involved in the situation of Professor Steinmetz, who has associated Cornell University with a personal situation of which we had no knowledge and in which we were not consulted, Cornell has withdrawn the invitation extended to him for the summer of 1954."

Study of Student Health Programs Released

ITHACA, N.Y.—Results of a survey of student health practices at 1157 American colleges and universities have been compiled at Cornell University into a manual the investigators hope will "stimulate the development of adequate standards of medical care for students in every college in the country." The study is described as the first comprehensive, nationwide investigation in its field.

The report was written by Dr. Norman S. Moore and Dr. John Summer-skill of the department of clinical and preventive medicine at Cornell, who supervised the study for the American

Appetizing nourishing food
administrative "headache" relief



Balanced diet
balanced budget



Controlled costs
competent staff

=



The RIGHT answer for
your student food services

MAIL TODAY

CAMPUS CHEFS, INC.

125 BROAD ST., ELIZABETH, N. J.

Without cost or obligation, we'd like to discuss our Food Service Program () Soon () When in our area

() Send us copy of "Any Way You Look At It"

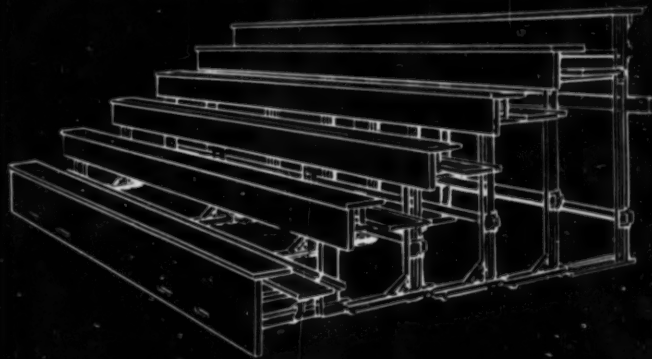
Name _____ Title _____

School _____

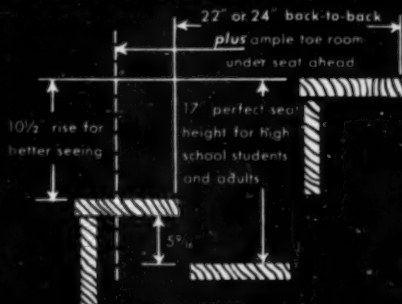
Address _____

City and State _____

BEST BUY!



TWO DEPTHS... 22" row depth for maximum seating capacity—24" row depth for greatest seating comfort.



MEDART *New* TELESCOPIC GYM SEATS*

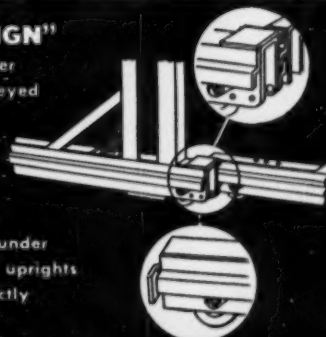
NEW DESIGN has achieved weight reduction up to 70 pounds per row—the easiest gym seat to open and close.

SELF-SUPPORTING understructure now stronger than ever—wood parts give additional strength.

4 VERTICAL UPRIGHTS support each row—controlled weight distribution—no extra wall reinforcing required.

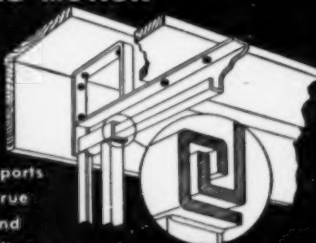
"DUAL-ALIGN"

cushioned roller housings are keyed together and interlocked for straight-line trackage. Non-marring rollers retract under load—vertical uprights then bear directly on floor.



"FLOATING MOTION"

opening and closing assured by interlocking members and multiple supports that insure true alignment and prevent binding.



Write For Catalog!



*Medart Telescopic Gym Seats are fully patented by U. S. Patent

THE MEDART PRODUCTS, INC. • 3234 DEKALB ST. • ST. LOUIS 8, MO.

Design... ALWAYS TELLS...



IN BETTER SEATING BY *Arlington*

There is something about a classroom equipped with Arlington Seating you instinctively like.

Perhaps it is the symmetry of line. Perhaps it is the warmth of the finishes or possibly visible evidence of quality in every detail.

Your impression is not just a happy coincidence but the natural response to seeing anything that has been exquisitely and perfectly made.

Arlington school seating design is one of the important points you will want to remember when you next order new or replacement equipment. For information about the complete Arlington line write for Catalog No. 54.

Arlington
SEATING CO.



ARLINGTON HEIGHTS, ILLINOIS

NEWS

College Health Association. The Continental Casualty Company of Chicago gave the funds for the project and also provided personnel to visit all the campuses on behalf of the association.

"The nationwide findings show clearly that there is no uniform or standard health program for college students," the report declared, in noting that campus health organizations range from complete in a number of cases to none at all in 200 of the 1157 colleges studied.

Among its findings, the manual also reported:

1. Of the 957 colleges with some sort of health program, 80 per cent have clinics. At the majority of these clinics students can obtain treatment for minor ailments and injuries but not for major disorders.

2. About two-thirds of the colleges have infirmaries, with an average bed capacity of 13 per thousand enrollment. Only one out of 10 infirmaries has facilities for surgery.

3. Students visit their college clinics or infirmaries an average of three times each during a school year.

4. About half the colleges provide some medical care for the faculty and other employees.

5. Health education is taught at most colleges, with a high percentage giving course credit. Half these colleges make health education compulsory.

6. Three-fourths of the colleges have staff physicians, the majority on a part-time basis.

7. Colleges allocate an average of \$7.50 a year for each student's medical care, but this figure varies from \$2.40 at the average two-year college up to \$9.40 at the average university. The majority of colleges spend less than \$10,000 on student health each year, but 46 colleges spend more than 10 times that amount.

8. A number of health services have a variety of programs including maintenance of campus sanitation standards, supervision of physical education, treatment of athletic injuries, and research.

"Regional differences in the extent of health services do not appear great," the report notes. Publicly supported colleges are most likely to offer some of the important health services investigated.

"The widest differences in student health services are related to the size of enrollment at a college. The larger

the new look in champion gym finishes

Chosen for
**THE LARGEST
PORTABLE FLOOR**
ever Built!



Only the finest TROPHY FINISH for largest portable gym floor at Texas A. and M. College. Floor received Hillyard TROPHY FINISH at the DI NATALE factory before shipping.

HILLYARD



GYM FINISH

OUTLASTS



OUTPERFORMS

The Tiffany of all finishes. For those who demand the best. An amazingly smoother, lighter finish with built-in controlled light reflectivity. Doubles the life of the playing surface. Its slip-resistant, non-rubber burn finish saves maintenance costs. See TROPHY features that make it the all-time TOPS in gym finishes.

DOUBLE
"CAR LOAD"
OF ENDURANCE
FOR ANY
GYM FLOOR



● **A LABORATORY ACHIEVEMENT**

TROPHY Gym Finish is a test-tube product, employing man-made synthetic type solvents and solids far superior to the phenolic resin and Tung Oil gym finishes in popular use today. It is the step-ahead treatment in a long line of specialized finishes developed through nearly 50 years of research at the Hillyard laboratories.

● **LARGE MOLECULES**

Because the molecules of TROPHY finish are so much larger than the old type finishes, a heavier film is produced with less solids. Therefore your TROPHY finish can be spread thinner, actually twice as far, for double the coverage.

Hillyard Maintainers are "on your staff, not your payroll" for free floor advice and help. There's one near you.

HILLYARD CHEMICAL CO., St. Joseph, Mo.

Passaic, N. J.

San Jose, Calif.

Branches in Principal Cities



● **ABRASION TEST PROVES LONGER LIFE**

TROPHY'S abrasion index (ability to stand use and wear) hits a new high of 854 as compared to 355 held by the toughest finish known to date. Proof that TROPHY gives more than twice as many years' service as the best finish on the market.

● **LIGHTEST, NON-DARKENING FINISH
CONTROLS LIGHT REFLECTIVITY**

Its silking appearance of a mat finish, "breaks up" light rays, reducing glare, providing better diffusion, and maximum light for action play and crowd viewing.

● **SLIP RESISTANT FOR FAST ACTION
CHAMPIONSHIP PLAY**

TROPHY'S smoother finish is slip-resistant with a high co-efficient of friction that assures safe footing, reduces muscle strain for players.

● **INCREASES COVERAGE, CUTS FINISHING COSTS**

With TROPHY treatment you use only 1 coat of finish. Because of this specification, and the increased coverage type solvent, TROPHY treatment costs you LESS in material costs and labor time.

MAIL COUPON FOR TROPHY FACTS

Hillyard Chemical Co.,
St. Joseph, Mo.

Please have the Hillyard Maintainer call, advise how I can give my gym the NEW TROPHY LOOK.
Please send my free copy of the new revised gym layout and lining file folder.

Name _____ Title _____
Institution _____
Address _____
City _____ State _____

the college the greater is the probability that a health service exists and the more comprehensive are the services, facilities and medical staffs available."

Sloan Urges Business Support of Colleges

NEW YORK.—In a recent television address Alfred P. Sloan Jr., board chairman of the General Motors Corporation, declared that business must provide financial support for the country's institutions of higher learning if

they are to remain free of the political influence that accompanies government aid.

"Business is not interested in the control of institutions of higher learning," Mr. Sloan said; "business is interested only in the end results. If government subsidizes the institutions, the political factor becomes more important than the business factor. The free enterprise system has an obligation to support them; otherwise government and its political influence will take over."

Job Market Still Good, But on Down Swing

NEW YORK.—"The pendulum has started swinging in favor of employers. The job market for college graduates is still very good, but the total demand for people is down and company representatives are being more selective."

Samuel H. Beach, director of placement at Columbia University, thus described the 1954 collegiate job-hunting period. Commenting on employment prospects, Mr. Beach continued:

"Whether actual hiring will be off because of this lower demand is a moot question. With Selective Service siphoning off so many prospective employees—and about 85 per cent of our college students are service eligible—available applicants are in short supply. The number of people coming out of service does not yet counterbalance the number going in. Engineers, chemists and physicists are still especially in demand and probably will be for several more years.

"Total needs are down, however, and each month more people come out of service and enter the job market. The bloom is off the rose, so to speak, and it's high time this happened. It will mean a much happier and healthier atmosphere on the campus if the lush job market available to many college graduates in recent years levels off. In general, it has not worked to their over-all advantage. Most of them have been blinded by such a multiplicity of good offers that they've neglected to make careful career decisions on their own.

"Paradoxically, though over-all demand for 1954 graduates appears to be on the down swing, employer requests for interviewing schedules and facilities at Columbia this spring were the highest in our history. We have been under more pressure this year for interviewing facilities and referrals than ever before; off-campus arrangements had to be made for the first time to accommodate all the requests. And job listings have been the largest in the office's history."

Mr. Beach explained that beginning salaries, on the average, are continuing upward, though not nearly as rapidly as in the last few years. The majority, he said, are the same as last year; some are up, none are down. It looks as if all starting salaries will level off by next year and hold steady, he added.



El Panama Hotel, Panama City, Panama / Ed. D. Stone, architect, Mendez & Sander, assoc. architects • no. 701 daybed / no. 92 chair

New ideas in hotel equipment, furniture and interior planning have introduced many remarkable low maintenance features for hotel lobbies, lounges and offices. Further information will be sent upon request.

► Knoll Associates, Inc.—575 Madison Avenue, New York 22—New York Furniture / Fabrics / Planning • Boston—Chicago—Dallas—Detroit—Miami—Washington



This is the type of dream kitchen your students look forward to in homes of their own.

The kind of kitchen students dream about...

They want to be modern...cook Electrically!

Because most home economics students are potential home-makers—because more homes every day are being equipped with modern *Electric Ranges*—students expect to have this modern range in homes of their own some day. That is why they need instruction in *Electric Range* cooking—why such instruction is necessary in your schools.

To keep your home economics laboratories constantly up to date, it is important to have *Electric Ranges*, and to have the latest models. If yours are out of date, your local electric light and power company, or electric appliance dealer, can advise about installing new ones.



School Laboratory Plans—To be sure your schools' home economics laboratories are modern, why not check them against the helpful **FREE** booklet—"The Modern Home Economics Department"? This valuable piece of literature includes suggested floor plans and other practical material, gives examples of how other schools arrange and equip their laboratories. Use the coupon to get your **FREE** copy!

ELECTRIC RANGE SECTION
National Electrical Manufacturers Association
155 East 44th Street, New York 17, N. Y.

ADMIRAL • BENDIX • CROSLEY
DEEFPREEZE • FRIGIDAIRE
GENERAL ELECTRIC • GIBSON
HOTPOINT • KELVINATOR • NORGE
MAGIC CHEF • MONARCH • PHILCO
WESTINGHOUSE



ELECTRIC RANGE SECTION
National Electrical Manufacturers Association
155 East 44th Street, Dept. CE-6-54, New York 17, N. Y.

Please send me, absolutely **FREE**, copy of "THE MODERN HOME ECONOMICS DEPARTMENT"—home economics laboratory planning booklet.

We have (total number).....students in our home economics classes.

Your name.....

Name of school.....

Street & No.....

City.....Zone.....State.....

NEWS

Brandeis Erects Interfaith Center

WALTHAM, MASS.—Brandeis University has begun construction of a Collegiate Interfaith Religious Center on the campus here, President Abraham Sachar reports.

The center will include three chapels, Protestant, Jewish and Catholic, and a large outdoor pool where public functions common to all faiths can be held. The chapels will be so situated around

the pool that one building will overlook another.

Designed in the contemporary style by Harrison and Abramovitz, New York architects, the chapel will reflect the similarity of all faiths while respecting their doctrinal differences.

Dr. Sachar declares that this is the first time in this country that a university founded by a religious community will supply separate places of worship for the world's major faiths. Brandeis is a Jewish founded, nonsectarian

liberal arts university. It opened six years ago on a 200 acre campus near Boston.

Student Center Approved by Wilmington Trustees

WILMINGTON, OHIO.—Wilmington College students recently cleared a major hurdle when the board of trustees agreed to study the advisability of an early start on construction of a new student center—with donations of student labor and student financial aid.

Demand from students for such construction was precipitated by the announcement that if the Kettering challenge goal of \$400,000 is successful, the present student union will be torn down to make way for one of the two proposed dormitories to be built with the money. The Kettering challenge was made by Charles F. Kettering of General Motors Corp. in Dayton, when he gave the college \$100,000 if it could raise \$300,000 additional. Two-thirds of the required amount has been raised.

Wilmington students, well aware of the tradition of self-help at the Quaker college, decided that if they help with their hands and their dollars (earned on the college work-study program), the college would be willing to move faster in getting such a center.

Motor Traffic Halted as Florida Classes Change

GAINESVILLE, FLA.—To control the problem of automobile traffic and congestion on the campus of the University of Florida, Acting President Dr. John S. Allen and George F. Baughman, business manager, have ruled that for 10 minutes of every hour auto traffic on campus must cease. The 10 minute periods coincide with class period changes so that students may walk from one building to another minus the hazard of moving automobiles.

According to a bulletin from the university, a stranger happening on the scene at just the right minute would view the following scene: "Students walking in a leisurely manner down the middle of the street. Nowhere throughout the heart of the campus a motor driven vehicle moving. Off on the side streets, drivers sitting, motors idle. Suddenly bells ring in every building and traffic again flows."



MODEL 10-6406-6
Stainless Steel Dish Truck

These COLSON Dish Trucks are attractively styled and sturdy enough to provide many years of efficient service. Edges are double thick for extra strength, frames are of 1 1/4" tubular stainless steel. Front wheels are 10" diameter, rear wheels are 5"—all have replaceable cushion-rubber tires and ball-bearing hubs to insure fast, quiet operation.

COLSON Stainless Steel Tray and Dish Trucks are extra sanitary — easy to clean because they have no cracks or crevices to invite bacteria. They're extra durable too — of sturdy welded construction, equipped with rugged wheels and casters. All over the country schools, clubs, restaurants and hotels—institutions of every kind — chose COLSON Service Trucks because of their durability, appearance and fast quiet operation.

Stainless Steel



TRUCKS

For Fast, Quiet Handling of Trays and Dishes



MODEL 10-6332
Stainless Steel Tray Truck

Heavy gauge shelves have double thick edges for extra strength. Heavy duty rubber bumper protects truck, other equipment and walls. Swivel type ball-bearing casters with cushion-rubber tires float heavy loads quietly—effortlessly. This deluxe tray truck is one of over 30 COLSON models.

Write for your free catalog
on COLSON Service Trucks

THE COLSON CORPORATION

ELYRIA, OHIO

Casters • Dish and Tray Trucks • Mop Trucks • Hand Trucks

"Everything on Wheels for Institutional Use"

NOW ODOR-FREE!!

The Most Famous of all Enamels



This is news! Barreled Sunlight Super Chinaline* ... the leader by which all other white enamels are judged ... is better than ever, whiter than ever, and odor-free.

Made by Barreled Sunlight's secret, exclusive "Rice Process" ... a process which no other manufacturer has ever been able to match ... Barreled Sunlight Super Chinaline is high above all other enamels for both solid hiding and permanent whiteness.

Easy to apply ... dries fast ... and leaves a

hard, tough, lustrous surface that washes like a china plate.

P.S. The same high quality applies to Barreled Sunlight Chinaline Enamel Undercoat, the perfect start for a perfect finish.

Write today for name of your nearest Barreled Sunlight distributor, the man with Super Chinaline.* Barreled Sunlight Paint Co., 35-F Dudley St., Providence 1, R. I.

*Reg. U. S. Pat. Off.

Barreled Sunlight *Paints*

In whitest white or clean, clear, wanted colors, there's a Barreled Sunlight Paint for every job



NEWS

Columbia Ends Grant From Warsaw

NEW YORK.—Columbia University has terminated the arrangements whereby for the last seven years it has received \$10,000 annually from the Communist controlled Polish government to finance a chair of Polish studies.

Ever since acceptance of the grant, the university has received vigorous protests from the education committee of the Polish American Congress. At

the time the grant was made, Dr. Arthur Prudden Coleman, then assistant professor of Polish language and literature at Columbia, tendered his resignation to Gen. Dwight D. Eisenhower, who was president of Columbia University at that time.

Rutgers Expands Plant

NEW BRUNSWICK, N.J.—The board of trustees of Rutgers University recently approved plans for a \$3,500,000

building program that would provide 60 classrooms, housing for 972 students, and a student center. President Lewis Webster Jones announced that the project would harmonize with a new \$4,000,000 library now under construction on the main campus, which is across the street from the contemplated buildings. First units in this building program will be ready for occupancy in 1955, it is anticipated.

Nevada Will Open Branch in Las Vegas

RENO, NEV.—The University of Nevada has announced the establishment of an expanded regional branch in Las Vegas to be known tentatively as "Nevada Southern."

Pending the acquisition of a suitable campus site, the new college will be housed in the new Las Vegas Union High School. The classes will begin in the autumn.

Dr. William R. Wood, dean of the statewide development program for the university, declares that, in addition to the beginning freshman program, plans are being made to offer an in-service program for elementary and secondary school teachers and administrators and an extensive schedule of continuing education for adults.

The regular tuition and fees in effect at the University of Nevada in Reno will be required at Nevada Southern. Residents of the state will not pay tuition, but out-of-state students must pay a fee of \$100 per semester. General fees for all students will range up to about \$33 per semester, while course fees are \$3 for art, \$10 for chemistry, and \$5 for typing.

M.S.C. to Give Master's in Institution Management

EAST LANSING, MICH.—The division of hotel, restaurant and general institutional management at Michigan State College here has announced a new curriculum leading to a master of arts degree. It will be offered in the fall.

Graduate courses may be selected from hotel management, restaurant management, general institutional management, accounting, economics, education, general business, and related departments. A selection of courses for the individual student will depend upon his previous preparation and interests. Students admitted with regular



FOSTER DORMITORY BEDS

with or without headboards



Mid-body support with 3 rows of coil springs

No. 4451-RDX—Two-piece bed with panel headboard

Modern styling and low height make this two-piece Hollywood style metal bed an ideal unit for dormitory use. Spring has three rows of non-sag center coil support to assure posture-perfect comfort. Durable all-steel construction for rugged service. Head panel available in stock wood grain finish. Matching colors on special order.

DX-Divan



Rugged simplicity in a low cost, comfortable, 1-piece metal bed that can serve a dual purpose as a studio couch in student's room. Spring unit has 3-row center coil for mid-body support.

Write for specifications and prices

FOSTER BROS. MFG. CO.

UTICA, N. Y.

ST. LOUIS, MO.

Quality Bedding Products Since 1871

Contract Division and Showrooms—1 Park Avenue, New York, N. Y.



St. Charles-equipped food laboratory in new Riverside High School, Riverside, Illinois.
Mrs. Treva L. Kelly, Instructor of Home Economics.

Multiple home kitchens form modern food laboratory custom-built of steel by St. Charles



The unique layout of this recently installed school unit offers unusual advantages to students and Home Economists alike. It conforms with the current instructional trend toward duplication of ideal home conditions in the food laboratory. Units may easily be employed simultaneously in class participation, or individually for special assignments. Activities in each "kitchen" are under constant, easy supervision of instructor, with round-end units allowing convenient passage. Storage of equipment is normal and home-like, avoiding the confusion of central storage

and checkout system. Pine Green base units combine with Sunny Yellow wall units to create a pleasing, stimulating atmosphere.

This interesting food laboratory represents only one St. Charles solution to one specific problem. The extreme flexibility of St. Charles custom-building and wide range of color-selection provide limitless solutions to any school situation. Won't you let us make suggestions for the development of *your* modern food preparation center? A post card or letter will bring complete details of our service by return mail.



"EDUCATION FOR LIVING"

Send for your free copy of "Education for Living," a recently published study of St. Charles products and their application to the homemaking classroom. Write

St. Charles CUSTOM EQUIPMENT

For the homemaking classroom • For the home kitchen

ST. CHARLES MANUFACTURING CO., 1617 E. Main St., St. Charles, Illinois

status may complete the academic work for the degree in three quarters, or approximately nine months. In addition to successful completion of the required course work, each student will serve an internship of one year in the professional field of his major interest before the degree will be granted. This requirement will be waived for students who present acceptable evidence of having received equivalent experience, Leslie W. Scott, director of the program, declares.

Yale Building Needs Set at \$30 Million

NEW HAVEN, CONN.—The committee on buildings and grounds of Yale University has announced the need for \$30 million for a construction and renovation program to end overcrowding.

Top priority, the committee declared, should be given to erection of a physics research laboratory, a wing to the electrical engineering building,

additions to the medical school, and to rehabilitation of Durfee Hall, the Sterling Chemistry Laboratory, and power generating plants.

The committee pointed out that in the last 15 years there has been virtually no addition to the physical plant to match the growth of the university and that far too little attention has been paid to maintenance and improvements. The committee, headed by Norman S. Buck, dean of freshmen and assistant provost, submitted the report to President A. Whitney Griswold, who will refer it to the Yale Corporation for official action.



OF EXHIBIT CASES

Michaels "Time-Tight" display cases rate high among discriminating buyers. They are tops in design, quality, structural features, appearance and usefulness. In "Time-Tight" cases displays are at their best. Visibility is perfect. Construction details, one of which is Innerlocking frames, exclusive with Michaels, reduce to a minimum the possibility of theft as well as the ingress of dirt, vermin and moisture.

Made in a wide range of sizes and styles "Time-Tight" cases meet virtually all the exhibit requirements of universities, schools, science laboratories, museums, art galleries, libraries, industrial exhibits and others.

Write for literature which gives complete information.

THE MICHAELS ART BRONZE CO., INC.
240 SCOTT STREET, COVINGTON, KENTUCKY

Manufacturers since 1870 of many products in Bronze, Aluminum and other metals

Union College Alumni Aid Faculty Salaries

SCHENECTADY, N.Y.—Union College's faculty was the recipient of \$30,000 contributed by the alumni association last month to bolster the salary level of the teaching staff. Ralph H. Rue, president of the Schenectady Trust Company and chairman of the 1953 Alumni Endowment Fund, presented the gift to Dr. Carter Davidson, college president.

Utilizing money contributed in the 1952 alumni fund drive, Union's program of alumni support of faculty salaries was inaugurated in April 1953 with a gift of \$29,000. As a result of the 1953 gift, the college was enabled to establish new faculty salary floors of \$6000 for full professors, \$5000 for associate professors and \$4000 for assistant professors. In so doing, Union took its place in the top 10 per cent of colleges of its size in the Middle Atlantic region.

In accepting this year's gift from the council, President Davidson stated: "Alumni generosity will enable us to continue the high level of faculty salaries established last year. Certainly no single issue is more closely related to Union's financial well-being and to the continuation of her present high standards of education. Whether large or small, a college can only be as good as its faculty."

College Group Seeks \$300,000 From Industry

LINCOLN, NEB.—Seven Nebraska colleges in the Nebraska Independent College Foundation have established a goal of \$300,000 which they hope to obtain in 1954 from business and



this one dormitory unit
fits student needs

day and night

New Beautyrest Sleep-Lounge

by SIMMONS



Beautyrest Sleep-Lounge fits attractively into space-saving corner arrangements—minimizes furnishing and housekeeping requirements.

By day it's a handsome chaise or sofa. But simply removing the bolsters and tailored slip cover turns it into an inviting headboard bed. With the new Beautyrest® Sleep-Lounge, one dormitory room fits student needs for both study and sleep—perfectly and economically.

The basic unit consists of an angle-iron frame and firm No-Sag Spring, equipped either with famous Beautyrest Mattress or Dorm Bilt, a fine standard inner-spring mattress. Accessories include headboard, tailored slip cover, and bolsters. Get full details from your supplier today, or mail coupon for information.

*Trade-mark Reg. U. S. Pat. Off.

SIMMONS COMPANY
CONTRACT DIVISION

DISPLAY ROOMS

Merchandise Mart, Chicago 54 • One Park Avenue, New York 16
295 Bay St., San Francisco 11 • 353 Jones Ave., N.W., Atlanta 1
8600 Harry Hines Blvd., Dallas 9

SIMMONS COMPANY
Contract Division
Merchandise Mart Plaza, Chicago 54, Illinois
Please send full details on Sleep-Lounge

Name.....

Address.....

City..... Zone..... State.....

THE TUITION PLAN

The Tuition Plan was founded in 1938 to provide a method by which schools and colleges may grant the convenience of monthly payments while they receive their tuition and other fees in full at the beginning of the term.

A descriptive brochure will be sent to schools and colleges promptly upon request.

THE TUITION PLAN, INC.

Lexington 2-1662 • 347 Fifth Ave., New York 16, N. Y.

NATION'S LEADING DESIGNERS



STADIUMS FIELD HOUSES BALL PARKS

Over 50 years experience in selection of site, preliminary investigation, complete design and modernization of sports structures.

STADIUMS

NOTRE DAME UNIVERSITY
South Bend, Ind.
U.S. MILITARY ACADEMY
West Point, N.Y.
UNIVERSITY OF MICHIGAN
Ann Arbor, Mich.
PURDUE UNIVERSITY
Lafayette, Ind.
MEMORIAL STADIUM
Little Rock, Ark.
WESTERN MICHIGAN COLLEGE
Kalamazoo, Mich.
UNIVERSITY OF MICHIGAN
Minneapolis, Minn.

BALL PARKS

CLEVELAND STADIUM
Cleveland, Ohio
YANKEE STADIUM
New York, N.Y.
FENWAY PARK
Boston, Mass.
MILWAUKEE STADIUM
Milwaukee, Wisc.
BRIGGS STADIUM
Detroit, Mich.
GRIFFITH STADIUM
Washington, D. C.
COMISKEY PARK
Chicago, Ill.

Write or Wire

The **OSBORN ENGINEERING** Company

7016 EUCLID AVENUE

CLEVELAND 3, OHIO

NEWS

industry, according to an announcement by Dr. David Crawford, president of the foundation.

Member institutions of the foundation include Concordia, Dana, Doane, Hastings, Midland, Nebraska Wesleyan, and Union.

The desired \$300,000 is about 10 per cent of the current operating costs of the institutions. The first 90 per cent of the budget of these independent colleges is provided by tuition fees, earnings on endowment, alumni gifts, appropriations from the supporting bodies, and other gifts.

Approve \$100,000 Grant for TV Station

COLUMBUS, OHIO. — An agreement under which a \$100,000 grant will be made by the Fund for Adult Education to Ohio State University for the purchase of equipment for its proposed new television station—WOSU-TV—was approved by the board of trustees.

Under terms of the agreement, the university must spend at least \$200,000 of its own funds in the construction of the station. The grant of \$100,000 will provide equipment for the station, of which \$30,000 must be used for kinescope equipment.

The university also agrees, under terms of the grant, that for a period of three years it will participate in the educational television and radio center at Ann Arbor, Mich., both by way of supplying suitable program material to the center and by serving as an outlet for programs offered through the center.

In order to obtain final title to the equipment, the university must use it for a period of eight years in the continuous operation of its educational television station. Otherwise, under terms of the agreement, the equipment so purchased must be returned to the Fund for Adult Education.

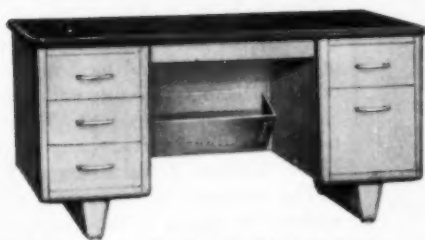
Contracts for the erection of a tower, TV antenna, and coaxial transmission line have already been awarded.

Dormitory Wings Will House 200 Men

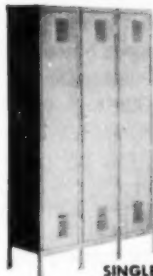
MINNEAPOLIS. — W. T. Middlebrook, vice president in charge of business at the University of Minnesota, reported that plans are going forward for completion of Centennial

SMARTLY-STYLED SCHOOL FURNITURE...

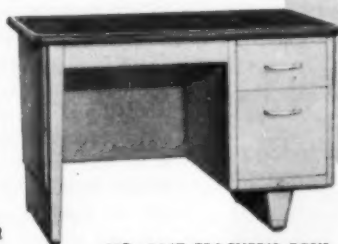
RUGGEDLY-BUILT SCHOOL LOCKERS!



NO. 6629 PRINCIPAL'S DESK



SINGLE-TIER
LOCKERS



NO. 6647 TEACHER'S DESK



DOUBLE-TIER
LOCKERS



NO. 810
UTILITY CHAIR



NO. 6276 LIBRARY TABLE



BOX AND MULTIPLE
TIER LOCKERS



NO. 5401 FILE

ASE FILES ARE
AVAILABLE IN
3 COMPLETE
PRICE RANGES



NO. 830 EXECUTIVE'S CHAIR



NO. 3487
STORAGE CABINET

WRITE US TODAY FOR
FURTHER INFORMATION.



NO. 1023
Secretary's Chair



NO. 340
Drafting Chair



Blueprint File



No. 5201 File



No. 3489
Wardrobe

ALL-STEEL EQUIPMENT INC.

Aurora,
Illinois

NEWS

Hall, men's dormitory, by the construction of two L-shaped wings designed to house an additional 200 students.

The new wings, expected to be ready for occupancy not later than the fall quarter of 1955, will increase the dormitory's capacity to 715. Pioneer Hall, older of the university's two men's residences, shelters 539. With the enlargement of Centennial Hall, the men's housing facilities will provide for 1254 men.

Vice President Middlebrook pointed

out that between 1100 and 1200 men students who applied for rooms in the dormitories last fall couldn't be accommodated.

Estimated cost of the three-story additions to Centennial Hall is \$830,000. Approximately \$350,000, representing accumulated earnings of university services including dormitories, will be available by June 30, Mr. Middlebrook reported. The university will have to borrow the additional \$480,000, he said.



Everything to gain . . . towel-waste to lose!

Colleges and universities which have installed MOSINEE top quality towels and Turn-Towel "Controlled Type" dispensers in their washrooms have learned by experience that they have hit upon the

perfect washroom towel service.

Towel consumption goes down as much as 40% and users enjoy the unmatched capacity of Mosinee towels to dry the hands.

Better towel service . . . less cost!

BAY WEST PAPER CO., GREEN BAY, WIS.

1110 West Mason Street

A Division of Mosinee Paper Mills Co.

Member of National School Service Institute

MOSINEE

Sulphate Towels

PREP-TOWLS • ZIP-TOWLS • TRIM-TOWLS • TURN-TOWLS • ROLTOWLS • BATH-TOWLS



Students to Construct Cottage on Campus

SAN ANTONIO, TEX.—Forty Trinity University home building students, assisted by the San Antonio Association of Home Builders and local suppliers of materials, have recently undertaken a construction project on Trinity's modern Stadium Drive campus—the Home Builders Research Cottage.

The students, 37 men and three women, all majors in the business of home building, broke ground recently on the 2500 square foot cottage, designed to serve three main functions: (1) to train Trinity home economic students in modern technics of home family living, involving multipurpose laboratories for studies in nutrition, textiles, child care and related subjects; (2) to provide a laboratory for Trinity students of home building, and (3) to demonstrate new home products and display a variety of modern materials of interest to students and professionals of the home building business.

Trinity students will perform the unskilled labor and, under supervision, will work with professional craftsmen in the technical phases of advance construction.

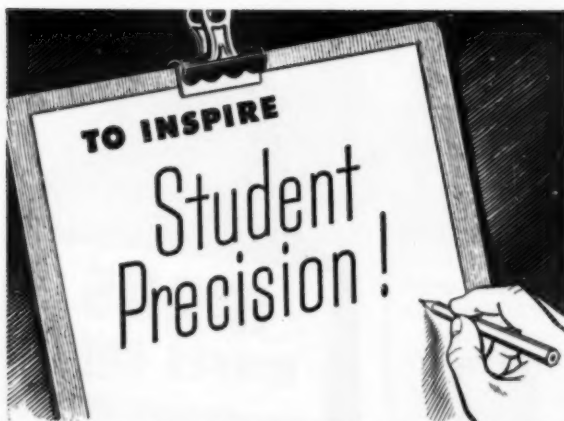
Mal Schraub, Trinity's director of home building and supervisor of the cottage project, said that San Antonio suppliers will be asked to contribute all material and professional services.

The Trinity Home Builders Research Cottage, which will conform to Trinity architecture, received its initial impetus when the San Antonio Association of Home Builders voted to endorse the project and made a gift of \$1550 to the building fund. This amount was transferred from an account originally set up to provide speakers for the home builders classes at Trinity.

NAMES IN THE NEWS

Dr. Hollis L. Caswell, dean of Teachers College, Columbia University, has been appointed president to succeed Dr. William F. Russell on July 1 of next year. Dr. Russell will have reached the mandatory retirement age of 65 by that time and will become president emeritus.

Clifford C. Furnas, vice president and director of the Cornell Aeronautical Laboratory, Inc., will become chan-



Preferred by instructors because they inspire students to new achievements . . . WESTON instruments also are the choice of practical administrators because their ruggedness and year after year dependability make their cost remarkably low! Ask for bulletin listing all instruments.

WESTON Electrical Instrument Corporation,
614 Frelinghuysen Avenue, Newark

For Advanced Requirements MODEL 622



Ultra sensitive instruments of the double pivoted type requiring no leveling when used in horizontal position. Combine high accuracy and a 6.1 inch scale . . . ideal for precise measurements of potential and current at very low energy levels. Available as d-c voltmeters, millivoltmeters, milliammeters and microammeters; electrolysis volt-millivoltmeters and high resistance voltmeters—also as a-c rectifier type instruments and as thermocouple ammeters, milliammeters and voltmeters.

For Electrical Machinery Labs MODEL 633

A clamp-on volt-ammeter built to Weston standards of safety, accuracy and dependability. Five full scale a-c current ranges of 1000/250/100/25/10 amperes with range overlap. Three self-contained a-c voltage ranges of 700/350/175 volts—insulated for 750 volts. Has convenient 6 position switch easily operated by thumb—adjustable pointer stop facilitates measuring starting current of motors.



WESTON



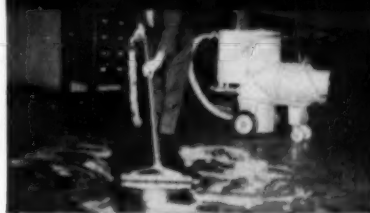
Instruments

Vol. 16, No. 6, June 1954

SPENCERS' GREATER VACUUM POWER MAKES THE MOST OF CLEANING HOURS



Designed and built for professional cleaning by the country's foremost vacuum cleaning experts. Spencer Portables, by actual test, pick up 6 times as much dirt as manual sweeping and in less time. To get the most out of your cleaning hours, give the operator an easy-to-use, powerful, efficient Spencer. You'll see the difference.



EFFICIENT
WET CLEANING
SAVES TIME

SEND FOR 32 PAGES
OF HINTS ON EFFICIENT
CLEANING



19P84

THE SPENCER TURBINE COMPANY • HARTFORD 6, CONNECTICUT

ADDRESS
DEPT. CU

SPENCER
HARTFORD

Please send my copy of A GUIDE TO EASIER CLEANING

Name

Street & No.

City & State

SUNROC Milk Dispenser



FOR
THE
FIRST
TIME

You Get All The
Advantages of cus-
tom built equip-
ment at a new low
price

Now Available For Immediate
Delivery

Write for complete details

SUNROC COMPANY

Glen Riddle, Pa.

Divisions and Branches in Principal
Cities

Beauty...
Comfort...
Permanence



Get all 3 with the

Colonial PARK
BENCH

Built ruggedly to withstand hard usage
and all weather, the Colonial offers every
feature you want and need in a park
bench. All bolts and screws are rust-
proof. White concrete legs are water-
proof and unit has heavy bracing for
extra strength. Wood slats finished in
weatherproof, green enamel. 6, 7 or 8
ft. lengths. Can be set on grass or bolted
down to base.

Write for details, price schedule.

ALTOONA CONCRETE PRODUCTS CO.

9th Avenue and 32nd Street • Altoona, Pa.

NAMES

cellor of the University of Buffalo
September 1. He succeeds Dr. T. Ray-
mond McConnell, who has resigned to
become professor of education at the
University of California.

Fred F. McLain, controller of Occi-
dental College in Los Angeles, will re-
sign July 1 after 33 years of service to
the institution. He will be succeeded
by Dr. Robert W. Fenix, financial vice



Fred F. McLain



Robert W. Fenix

president of Willamette University, Sal-
lem, Ore., where he has been a mem-
ber of the staff since 1943. Both Mr.
McLain and Dr. Fenix are past presi-
dents of the Western Association of
College and University Business Offi-
cers.

Maj. Gen. Edward E. MacMorland
was recently inaugurated as fifth presi-
dent of Pennsylvania Military College,
Chester.

Dr. Wilson H. Elkins, president of
Texas Western College, has been named
president of the University of Mary-
land, Baltimore. He succeeds H. C.
Byrd, who resigned in January to be-
come Democratic candidate for gov-
ernor of Maryland.

Dr. J. Kenneth Little, vice president
of student affairs at the University of
Wisconsin, is taking leave of absence
to become deputy United States Com-
missioner of Education. The appoint-
ment was made by Mrs. Oveta Culp
Hobby, Secretary of Health, Education
and Welfare. Dr. Little will be on
leave from the university until June 30,
1955.

Samuel B. Gould, former assistant
to the president of Boston University,
has been elected president of Antioch
College, Yellow Springs, Ohio, effective
in July. He will succeed Dr. Douglas
McGregor, who will return to Massa-
chusetts Institute of Technology.

Jay Lydic, food service director at
Clarkson College, Potsdam, N.Y., has
been named food buyer for the Univer-
sity of Rochester. A member of the
purchasing department, he will be re-
sponsible for the procurement of all
food items for university operations,
including the medical center, according



**ELECTRONIC
BELLS or
TUBULAR CHIMES?**

**MAAS
MAKES BOTH!**

SINGLE BELLS
PEALS • CARILLONIC SETS

Regardless of your needs you'll find it among
our vast line of fine bell instruments...
starting as low as \$310.

Over 22,000 installations attest their
superiority. Get the facts before
buying. Write for details.

**MAAS-ROWE
CARILLONS**



Dept. 36, 3015 Casitas Ave., Los Angeles 39, Calif.

this
sword
means
Cancer
EDUCATION



Words of truth and hope
from the American Cancer
Society save many lives each
year from cancer... could save
thousands more.

Under the sign of the cancer
sword you and your neighbors
can learn vital facts... your
physician can secure informa-
tion on diagnosis and treatment.
Cancer Strikes One in Five.
Your Dollars Strike Back.

Mail Your Gift to "Cancer"
Care of Your Local Postoffice

**AMERICAN
CANCER SOCIETY**


COLLEGE and UNIVERSITY BUSINESS



W E D

WASHER-EXTRACTOR-DRYER COMBINATION

miracle All-in-One Laundry Unit!



You owe it to yourself to get full particulars about this sensational new laundry unit — there's nothing like it on the market! WED makes multiple units obsolete! WED does more—costs less—saves more time, space and labor than any comparable group of units!

Write, Wire or Phone Nearest Office Today For Information and Location of Nearest Installation

TELECOIN CORP.

"Originators and Pioneers of Launderettes and Automatic Self-Service Laundry Systems"

12 East 44th Street, New York 17, N. Y.
Phone: MUrray Hill 7-7800

40 lbs. of Laundry — and More — Washed, Extracted and Shaken Out ready for Ironing OR
20 lbs. of Laundry — and More — Washed, Extracted and Completely Dried.

Automatically — In this one compact machine — In One Complete Operation — With one setting of the dials!
WED SOLVES ALL LAUNDRY PROBLEMS — particularly where space and time is at a premium, such as Hotels, Motels, Schools, Institutions small and large!

There is No Other Laundry Unit — or Group of Laundry Units — Like It! WED handles every kind of wash — delicate linens — full loads of bed sheets — as many as 80 shirts can be washed in 32 minutes ready for finishing — Rugs as large as 9 x 12 — Chenille Bedspreads, etc.
WED requires no skill to operate — automatically adjusts itself to varying loads — automatically reduces water and time required for smaller loads — obviates those complicated trips with damp laundry from washer to extractor to dryer!

All Stainless Steel

5519 Broadway
Chicago 40, Ill.
UPTown 8-7575

3467 West 8th Street
Los Angeles, Cal.
DUnkirk 1-3818

1545 Mission Street
San Francisco, Cal.
HEmlock 1-0472



Checkersette®

"Fold-away Steel Rack"

Meet a dozen everyday school needs—in auditoriums, laboratories, gyms, cafeteria, shop, classrooms, library, etc. Goes anywhere. Set up in minute without tools. Stores away like folding chair when not in use. Holds wraps, gowns, athletic gear, band uniforms, choir robes, etc., in a compact and orderly manner. Rail can be placed at 3 different heights to accommodate different age groups, long robes, etc. Lifetime construction—welded heavy gauge box and "U" form sections; baked gray enamel finish. 4 ft. single faced unit takes 24 coat hangers; 4 ft. double faced unit 48. Three foot units also available.



Capacity can be doubled by using snap over coat hooks

Write for Bulletin CT16

VOGEL-PETERSON CO.

"The Coat Rack People"

1121 West 37th Street • CHICAGO 9, ILL.



THIS SUMMER SELL LEMONADE

For Bigger Profit!!

SELL this favorite summer beverage and pull in extra business! You can make MORE profit by using DON LEM-O-RICH with its rich flavor of freshly-squeezed lemons. This 10 oz. jar is equivalent to 128 lemons. Think of the time and labor saved in squeezing and handling, and the storage space saved! LEM-O-RICH is made from tree-ripened fresh lemons. No preservatives. Just add water and sweeten to taste — that's all! No "settling out." Costs — with straw, ice, sugar and cherry — less than 2c a glass. A big money maker — and your customers will love it!

This is another money-making item from among the 50,000, including equipment, furnishings and supplies sold by DON. Satisfaction Guaranteed or Money Back! Write Dept. 6 for a DON salesman to call.

EDWARD DON & COMPANY

1400 N. Miami Ave.
Miami 32

2701 S. LaSalle St.
CHICAGO 16

27 N. Second St.
Minneapolis 1

NAMES

to an announcement by **Warren W. Irwin**, general purchasing agent.



Wesley Hertenstein

Wesley Hertenstein, superintendent of buildings and grounds at California Institute of Technology, Pasadena, was recently elected president of the National Association of Physical Plant Administrators of Universities and Col-

leges. **C. B. Jensen**, superintendent of buildings and grounds at the University of Wyoming, was named vice president, and **A. F. Gallistel**, director of physical plant planning at the University of Wisconsin, was reelected secretary-treasurer. The association voted to hold next year's meeting at the University of Wyoming, Laramie.

F. L. Peterson, president of Oakwood College, Huntsville, Ala., recently announced his resignation. He has been succeeded by **Garland Millet**.

Dr. Ralph A. Van Meter, 13th

president of the University of Massachusetts, recently submitted his resignation to the board of trustees upon instructions



Jean Paul Mather

from his physician. **Jean Paul Mather**, provost of the university, has been appointed president to succeed Dr. Van Meter. Before becoming a member of the University of Massachusetts staff, Dr. Mather had been a staff associate and assistant treasurer of the American Council on Education and part of that time had been director of curriculum and instruction at the University of Denver's college of business administration.

Raymond J. Spaeth, vice president-treasurer of Illinois Institute of Technology, recently announced reassignment of duties of the business administrative staff owing to increased responsibilities resulting from campus expansion. **Harry S. Temple**, controller, has been named assistant treasurer, assistant secretary, and bursar. **Robert H. Jarrell**, formerly assistant controller, succeeds Mr. Temple as controller. **M. T. Tracht**, formerly assistant treasurer and purchasing agent, is now assistant treasurer in charge of services with responsibilities for administrative services, such as purchasing, stores, property, post office, and auxiliary enterprises. **Paul J. Fox**, general manager of the campus bookstore since 1941, is manager of the Commons Building, a newly completed dining, shopping and recreational facility on the campus. **Steve Senuta** has been advanced from an assistant purchasing agent to purchasing agent.

Paul W. Young, director of public relations and alumni affairs at Wilmington College, Wilmington, Ohio, has resigned to accept appointment with the Hospital Care Corporation in Cincinnati. Mr. Young has been public relations and alumni affairs director of Wilmington College since July 1952.

Everett N. Case, president of Colgate University, was elected chairman of the board of the Empire State Foundation of Independent Liberal Arts Colleges at its annual meeting at the Biltmore Hotel in New York City. Dr. Case succeeds **Carter Davidson**, president of



Huntington 150 Series.
Wall saver construction.
Available in every combination.



86 patterns in beds and cases to choose from.



76 patterns in seating units for every use.
Designs by Jorgen Hansen and Jens Thuesen.



Furniture by

HUNTINGTON

-always in good Taste

CAUB Please mail complete information about Huntington furniture to:

Company _____

City _____

Attach to your letterhead and mail to:
Huntington Chair Corporation, Huntington, W. Va.

for smooth, trouble-free
performance, insist on a
Von Duprin
COMPLETE EXIT



NL 46 A² Devices. Inside operation at all times—outside key retracts latch bolt. Completely drop-forged.



1254 "Frame Pattern" Mullion. Extruded aluminum body easily removed for full opening. Drilled and tapped for strikes.



1407-J Strikes. Adjust laterally to compensate for warped doors. Rollers on friction-free monel metal axles.



12390 "Latch Track" Threshold. Provides full opening door stop. Stumble-proof. Wind and water stop is full 1/4" thick.



● Whatever your exit needs, the Von Duprin line includes all types of devices and auxiliary items for a complete exit installation which is dependable, attractive—and above all, *safe*. Each Von Duprin exit hardware item is styled and engineered for unfailing, harmonious operation.

● Whenever you plan exit installations, insist on Von Duprin for the complete job. A Von Duprin "Exit Specialist"—either a factory representative or a selected builders' hardware distributor—will be happy to help you plan the most practical installation. For his name, write direct to:

VONNEGUT HARDWARE CO. • VON DUPRIN DIVISION • INDIANAPOLIS, INDIANA



"THE SAFE WAY OUT!"

NAMES

Union College, who had served as chairman of the foundation since it was organized two years ago.



Glenn F. Shupe

Glenn F. Shupe, formerly a construction superintendent for several industrial concerns, is the new superintendent of buildings and grounds at Wittenberg College at Springfield, Ohio.

Dr. Harold E. Hammond, public relations director at Union College, Schenectady, N.Y., for the last two years, has announced his resignation in order to engage in private public relations practice. His resignation becomes effective September 1.

Gertrude Dorety, national news editor, Syracuse University, Syracuse, N.Y., has resigned to accept appointment with the department of public relations of the New York State Department of Mental Hygiene in Albany.

James Miller, assistant business manager of the University of California, was named president of the Western Association of College and University Business Officers at the conclusion of its annual convention at Palo Alto, Calif. Other new officers are: vice president, Gerard Banks, bursar of the College of Puget Sound; secretary, G. Morris Robertson, business manager of Oregon State College, and treasurer, Ernest M. Conrad, assistant controller of the University of Washington. The 1955 meeting will be held at Tucson, Ariz.



James Miller

Robert E. Hill, assistant to the controller of Brown University, Providence, R.I., since 1951, has been made assistant manager of student residences. He succeeds William I. Crooker, who has accepted the post of manager of housing in the plant and operations department at Dartmouth College, Hanover, N.H. Mr. Hill will assume his new duties July 1.

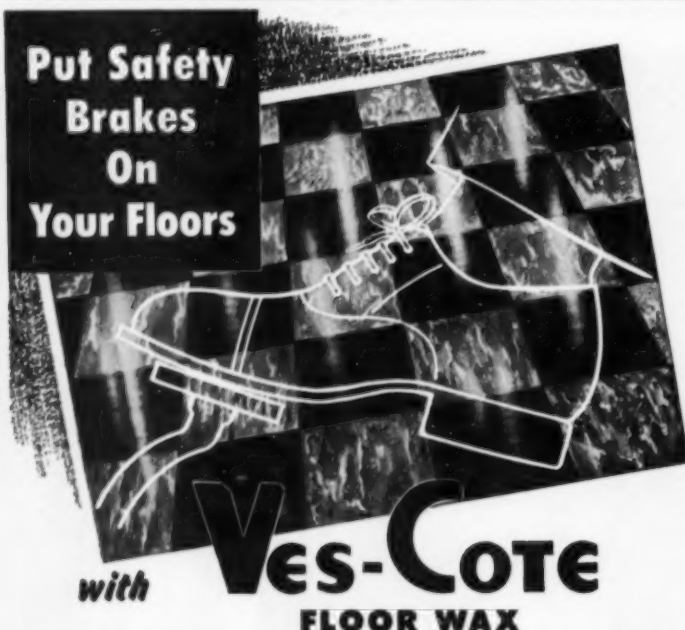
Dr. J. Ralph Murray, president of Greenbriar College, Lewisburg, W. Va., has been named president of Elmira College, Elmira, N.Y. He will take office July 1, succeeding Dr. Lewis Eldred, who has resigned to devote himself to curriculum development at the college and to direct its community education program.

Ralph J. Watts, retired vice president and business manager of Lawrence College, Appleton, Wis., died on May 23 in Auburn, Ind., while returning to his home in Amherst, Mass. Mr. Watts had been in Appleton, where he attended the 25th anniversary of the Institute of Paper Chemistry, which he had helped to organize. He was business manager and vice president of Lawrence College from 1926 until his retirement last year. Before that he had been secretary to the president of the University of Massachusetts. Recently Mr. Watts had been active as a staff member of the committee on the preparation of Volume II of "College and University Business Administration."



Ralph J. Watts

Put Safety Brakes On Your Floors



There is new safety in walking when floors are finished with Ves-Cote . . . because Ves-Cote contains a new and proven anti-slip agent, DuPont's "Ludox"* colloidal silica. These minute particles of "Ludox"* create excellent sole and heel traction—offer effective braking action for each step.

In addition to safety, Ves-Cote dries to a high lustre; is long-wearing; water resistant; easy to apply and dries quickly.

If you need safe floors, yet demand attractive floors—Ves-Cote is your answer.

*Trademark of E. I. Du Pont de Nemours & Co., Inc.

VESTAL



Approved by the Underwriters Laboratories.

INCORPORATED
4963 MANCHESTER AVE.
ST. LOUIS 10, MISSOURI



No. 10645

SINGLE STUDENT'S DESK

Does Double Duty



No. 10645 SPECIFICATIONS

Natural Birch or Maple finish. (Other finishes can be supplied). Top, 36" x 20". Height, 30". Metal cushion glides. Choice of wood or brushed brass knobs. Weight, 50 lbs.

Write for Bulletin 1009.

This attractive desk can be used anywhere in a room. It is beautifully finished all over and has an unusual "two-way" drawer. The drawer (shown in sketch) has a safety stop, which prevents its being pulled out all the way. Shelves accommodate text books, etc. Genuine Woodgrain Formica top prevents damage from burns and scratching.

EICHENLAUBS
For Better Furniture

1501 BUTLER ST., PITTSBURGH 1, PA.
ESTABLISHED 1873

MAXIM SNOW THROWERS

never take a vacation

In winter, the most efficient and economical snow removal ever devised . . . In summer, spring, and fall the Maxim Snow Thrower's 7½ horsepower can be put to work with convenient attachments for mowing, rolling, grading and hauling. Conversion is quick and easy. For details on how the Maxim Snow Thrower works for you the whole year 'round, write Dept. TW.

THE MAXIM SILENCER COMPANY
129 HOMESTEAD AVENUE - HARTFORD 1, CONN.

WHAT'S YOUR WASTE BASKET MORTALITY?



Replacing waste baskets often can become expensive. If, after several years of hard service, the receptacles you buy begin to look more like waste than waste baskets, it will pay to consider . . .

VUL-COT®

Vul-Cots reduce waste basket costs because they are a life-time product. Your first Vul-Cot cost is your last because famous Vul-Cots are practically indestructible.

These qualities will make Vul-Cots pay off for you . . .

- Made of Hard Vulcanized Fibre.
- Exclusive double rolled top won't break, loosen, or fray, and it remains smooth and round for the life of the basket.
- Bonded side seam adds strength, provides a more attractive appearance.
- Color is an integral part of the fibre . . . it can't chip, or wear off. VUL-COTS will not mar or stain furniture or clothing.
- VUL-COTS are guaranteed not to crack, splinter, dent, rust or corrode.



May we send you the VUL-COT catalog price sheet? Write direct to Dept. U-6. Sold by stationers and school supply houses everywhere.



NATIONAL
VULCANIZED FIBRE CO.

WILMINGTON 99, DELAWARE

DIRECTORY OF ASSOCIATIONS

National Federation of College and University Business Officer Associations

President: Irwin K. French, Wellesley College; vice president: Gerald D. Henderson, Vanderbilt University; secretary-treasurer: Nelson A. Wahlstrom, University of Washington.

National Association of College and University Housing Officers

President: J. C. Schilleter, Iowa State College; vice president: M. R. Shaw, Cornell

University; secretary-treasurer: Ruth N. Donnelly, University of California, Berkeley.

College and University Personnel Association

President: Max W. Sappenfield, Southern Illinois University, Carbondale; secretary-treasurer: Clara Stimson, University of Rochester; executive secretary: Donald E. Dickason, University of Illinois. Permanent headquarters, 809 S. Wright St., Champaign, Ill.

Convention: Aug. 15-18, International House, University of California, Berkeley.

Association of College and University Business Officers

American Association

President: W. C. Ervin, Paine College; secretary: B. A. Little, Southern University.

Central Association

President: Clifford DeLong, University of Illinois; secretary-treasurer: T. N. McClure, Knox College.

Eastern Association

President: John W. S. Littlefield, Colgate University; secretary-treasurer: Irwin K. French, Wellesley College.

Convention: Dec. 5-7, Shoreham Hotel, Washington, D.C.

Southern Association

President: J. H. Dawberry, University System of Georgia; secretary-treasurer: Gerald D. Henderson, Vanderbilt University.

Western Association

President: James Miller, University of California; secretary: Morris Robertson, Oregon State College.

1955 Convention: Tucson, Ariz.

Association of Physical Plant Administrators of Universities and Colleges

President: Wesley Hertenstein, California Institute of Technology; secretary-treasurer: A. F. Gallistel, University of Wisconsin.

1955 Convention: University of Wyoming, Laramie.

Association of College Unions

President: William Rion, University of Florida; secretary-treasurer: Edgar A. Whiting, Cornell University; editor of publication: Porter Butts, University of Wisconsin.

1955 Convention: White Sulphur Springs, W. Va.

National Association of Educational Buyers

President: Henry Doten, University of Maine; executive secretary: Bert C. Ahrens, 1461 Franklin Ave., Garden City, N.Y.

1955 Convention: New York City.

American College Public Relations Association

President: Mrs. Veta Lee Smith, Marshall College, Huntington, W. Va.; executive secretary: Marvin W. Topping, 726 Jackson Place, N.W., Washington 6, D.C.

Convention: June 21-24, Hotel Roosevelt, New York City.

National Association of College Stores

President: R. C. Avery, Cornell Campus Store, Ithaca, N.Y.; executive secretary: Russell Reynolds, Box 58, 33 West College Street, Oberlin, Ohio.



METAL MAKES A DIFFERENCE

When it comes to furniture — stronger, longer lasting Turk metal is best by far.

Turk metal furniture is fireproof, stainproof, easy to clean... and permanently beautiful. Sectional construction enables low cost maintenance or replacement of parts.



That is why leading colleges and universities are insisting upon Turk, the metal furniture that stubbornly defends its beauty under the most brutal conditions. Write, wire or phone for information.

For the name of your Turk dealer, write, wire or phone
JOS. TURK MANUFACTURING CO., Bradley, Illinois — Phone 3-4461
New York Office: 67 W. 44th St. — Murray Hill 7-7555

...at the head of CLASS

HORNER

ALL
WOOL

**ANTI-SHRINK
DORMITORY BLANKETS**

**with your
SCHOOL EMBLEM**

Your school will be justly proud of your own special dormitory blankets by Horner . . . emblazoned with the school's initials or emblem . . . and treated by Horner's exclusive anti-shrink process which reduces blanket shrinkage 83 per cent.



Passenger Blankets — quality-selected to outfit the U.S. United States, America's finest luxury liner.

IN ANY SIZE OR COLOR

write: **HORNER WOOLEN MILLS COMPANY**
EATON RAPIDS, MICHIGAN

No. 315
UNIVERSITY
TABLET
ARM CHAIR.
Ideal for class
or lecture room



**DESIGNED
FOR
VALUE!**



- Solid hard maple seat—saddled for comfort.
 - Large solid maple tablet arm—in proper writing position.
 - Heavy cast metal pedestal—non-flexing—stays put.
 - Available with underseat bookrack.
 - Suntan color—finished in tough scratch resistant "Celsyn".
 - Available with Fibresin plastic tablet arm
- "No One Ever Regretted Buying Quality"

PEABODY SEATING COMPANY, INC.
NORTH MANCHESTER INDIANA

LIFTS DIRT...
HOLDS IT OFF...

CINDET

100% ACTIVE 100% SAFE!

NEW LIQUID SYNTHETIC DETERGENT

CINDET can be used in hard or soft water for the hundreds of cleaning needs throughout your school or college buildings. It LOOSENS dirt quickly, LIFTING IT AWAY AND HOLDING IT IN SUSPENSION in a mass of creamy suds. Removes stubborn stains, rubber marks.

CINDET works fast, dries quickly, can be used safely on anything water itself won't harm—including the user's skin. Use CINDET to strip old water emulsion waxes from floors quickly and surely, AND FOR ALL GENERAL CLEANING PURPOSES.

CINDET is approved by the Rubber Manufacturers' Division of the Rubber Manufacturers' Association.

Write for Dolge literature on CINDET, and have your DOLGE SERVICE MAN demonstrate its easy, economical use.



FOR FREE
SANITARY SURVEY
OF YOUR SCHOOL
CONTACT YOUR
DOLGE SERVICE MAN

DOLGE

WESTPORT, CONNECTICUT



Women are discreet instinctively. The modern powder room is equipped with the SANIBAG method of quick, modest disposal of sanitary napkins. SANIBAG service is practically a must in motels, schools, hotels, restaurants and public buildings.

SANIBAG service not only pays off in good will, but with dollars saved in maintenance costs. Also a tremendous saving in plumber's bills arising from toilet stoppages. To provide SANIBAG service is simply good business judgment.

When writing for free samples and complete information, please include the name and address of your supply merchant.



Beier & Company

NEW SOUTH GREENE, IOWA
EATON RAPIDS, MICHIGAN

So economical
many schools use
it exclusively . . .

CHI-NET
molded paper
tableware



Dishwashing can be eliminated entirely by this sanitary, disposable tableware. Individually molded to shape and depth of standard chinaware . . . CHI-NET plates and dishes are attractive as well as practical. You can pile these plates and dishes high with food . . . they'll never buckle or bend when held by the rim. Waterproofed and grease-resistant, CHI-NET doesn't get soggy, resists pressure of knife . . . won't scrape or flake off. By the makers of the famous KYS-ITE MOLDED PLASTIC TABLEWARE.



Keyes Fibre Sales Corporation, Dept. CU
420 Lexington Ave., New York 17, N. Y.
Please send me further information on
☐ Chi-net Tableware
☐ Kys-ite Tableware

NAME.....TITLE.....
NAME OF SCHOOL.....
ADDRESS.....
CITY.....ZONE.....STATE.....
MY WHOLESALE IS.....

classified advertising

POSITIONS WANTED

Bookstore - Union - Service Enterprises - Food Service—Twenty years teaching experience; bookstore, three years in college, as student twelve years in high school, nine years in college; four years union building and food service; MS Degree 1944; data sheet on request. Write Box CW-210, COLLEGE AND UNIVERSITY BUSINESS.

Business Officer—Association with a college or private school desired by person with trust and investment experience, together with a legal background; modest salary requirements. Write Box CW 206, COLLEGE AND UNIVERSITY BUSINESS.

Business Manager—Experienced; proven ability in reducing deficit, financial reports, budgets, investment supervision, purchasing, maintenance, dining hall; desires change to smaller college; mature, Protestant, pleasing personality. Write Box CW 209, COLLEGE AND UNIVERSITY BUSINESS.

Comptroller-Treasurer—Record of contribution to the profession; thorough knowledge of college and university financial management; AB, Cum laude, Vanderbilt, 1934, MA in Accounting, 1950, Illinois; thorough knowledge of practical methods in accounting, budgeting, cost analysis; top references coast to coast. Write, HARVEY SHERER, Oregon State College, Corvallis, Oregon.

POSITIONS OPEN

Bookstore Manager—Wanted for established university-owned store located in student union building; all new fixtures, increasing volume of business, excellent opportunity in university with 9500 students. Write to C. E. Puffer, Treasurer, UNIVERSITY OF BUFFALO, Buffalo 14, New York.

Buyer—Young man preferably with college background and some experience in food buying; to assist purchasing agent in small department; Chicago educational institution. Write particulars Box CO-148, COLLEGE AND UNIVERSITY BUSINESS.

Cook—For girl's dining hall serving approximately 200 at BALDWIN-WALLACE COLLEGE, Berea, Ohio. Write to Mrs. R. J. Schumacher, Director of Food Service.

Dietitian—For girl's dining hall at BALDWIN-WALLACE COLLEGE, Berea, Ohio. Write to Mrs. R. J. Schumacher, Director of Food Service.

Dietitian—To supervise and manage preparation of food for six dining rooms in girls residence halls; faculty status, experience required, salary open; 40-hours week, one month vacation. Apply to Miss Selma Streit, Director, College Housing and Food Service, WASHINGTON STATE COLLEGE, Pullman, Washington.

Food Production Manager—For men's residence hall cafeteria and snack bar; prefer young man with university food service training; position provides excellent experience, opportunity for advancement, other benefits; available Sept. 1, 1954; send background data and references to Box CO 143, COLLEGE AND UNIVERSITY BUSINESS.

Food Service Manager—Excellent opportunity for qualified man to join food service organization specializing in college and university feeding; give full details in first letter. Write Box CO 144, COLLEGE AND UNIVERSITY BUSINESS.

Manager of Stores and Services—Young man for midwest urban technological institution; college graduate, preferably in business subject; some experience; to manage stores, duplicating, mailing and post office. Write qualifications and salary requirements Box CO-147, COLLEGE AND UNIVERSITY BUSINESS.

The rates for classified advertisements are: 20 cents a word;
minimum charge, \$4. (No charge for "key" number.)

Forms close 25th of month preceding date of issue.

Address replies to

COLLEGE AND UNIVERSITY BUSINESS

919 N. Michigan Avenue, Chicago 11, Ill.

COLLEGE and UNIVERSITY BUSINESS

SHINES UP
POTS - PANS

MAKES GLASSES
DISHES SPARKLE

MAGIC ACTION ON
GREASY UTENSILS

KEEPS STAINLESS
STEEL BRILLIANT

IDEAL FOR WINDOWS
PAINTED SURFACES

KLENZADE

There's Nothing
Like **KLEER-MOR**
in the Kitchen



KLEER-MOR

CLEANS EVERYTHING

*America's
Most Versatile
Cleaner*

KLENZADE PRODUCTS, INC.
DELOIT, WISCONSIN



5321 for two
53 x 30 x 29"

5322 for three
70 x 30 x 29"

engineered for public use

sculptured and suspended . . . 1-2-3 unit
settees by Thonet designed for modern
beauty and comfort yet sturdily constructed*
for lasting durability in public use.

*THONET'S famous bending and molding
processes eliminate troublesome glue joints.



INSTITUTIONAL SEATING

SPECIALISTS SINCE 1830

Tell us your needs.—We'll
send full illustrative material.

THONET INDUSTRIES INC. dept. H6
One Park Avenue, New York 16, N. Y.

Showrooms:

New York • Chicago • Los Angeles
Dallas • Statesville, N. C.



5320 for one
28 x 30 x 29"
all with 4" molded rubber seats and backs

The Original TABLET ARM CHAIR THAT FOLDS

IMITATED BUT UNEQUALED

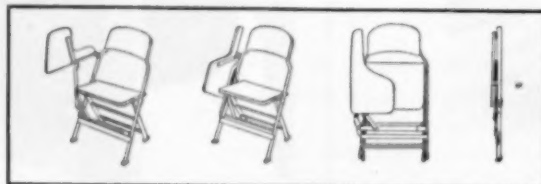
● Only *Clarin* chairs can be used equally well for ordinary seating . . . with the arm folded down at the side.

● Only *Clarin* chairs let you lift the arm out of the way as you sit down or stand up.

● Only *Clarin* chairs are engineered and built to Clarin standards of strength and quality.

Write for full information:
Clarin Mfg. Co., Dept. 9,
4640 W. Harrison St.
Chicago 44, Illinois

FOLDS FLAT IN 3 EASY STEPS



Foam rubber cushioning a CLARIN PLUS feature.

Clarin

There is a Clarin Steel Folding Chair for every age from nursery school to adult—and for every need—the only complete line made. Write for Free Illustrated Catalog.

ENGINEERED QUALITY MAKES THE BIG DIFFERENCE IN FOLDING CHAIRS

WHAT'S NEW

June 1954

Edited by Bessie Covert

TO HELP you get more information quickly on the new products described in this section, we have provided the postage paid card opposite page 92. Circle the key numbers on the card which correspond with the numbers at the close of each descriptive item in which you are interested. COLLEGE and UNIVERSITY BUSINESS will send your requests to the manufacturers. If you wish other product information, just write us and we shall make every effort to supply it.

Large Groups Accommodated in Wayne-White Bus



The new Wayne-White Transit Type Bus has a seating capacity of 73. Available in three models, the new bus is particularly adapted for carrying groups such as bands, athletic teams, debating teams and similar organizations. It incorporates the most modern elements of bus construction and safety, is engineered to rigid specifications and conforms to the special equipment requirements of individual states.

The bus is powered by the new Mustang engines to provide sufficient reserve power for all types of travel, on any terrain. It features a rear engine drive and is equipped with extra large brakes. The extra-heavy frame gives full support to the body and prevents body flexing. The bus has two emergency exit windows, one in the side and one at the rear. **White Motor Company, 842 E. 79th St., Cleveland 1, Ohio.**

For more details circle #415 on mailing card.

Portable Sound System Offers Wide Coverage

Superior tone quality is claimed for the new RCA Portable Sound System designed for audiences ranging from a few to several thousand. The equipment can be used in a wide variety of applications in auditoriums, playgrounds and similar areas. It includes four newly designed components: a deluxe dual-speaker carrying case, either a 15 or a 30 watt amplifier and a dynamic microphone with stand. The durable carrying case is easily carried. It divides into two acoustically designed baffles, each housing a heavy duty 12 inch loudspeaker with 25 feet of cable and connectors. Both sized amplifiers reproduce sound from one or two microphones and one record player.

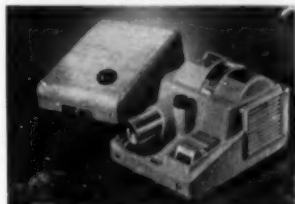
The non-directional type microphone has excellent response for close-up talking as well as for remote pick-up and

mobile use. A small microphone desk stand can be carried in the portable case. All parts are held securely in position during transportation. Operation of the sound system is as easy as a radio set. **Sound Equipment Section, RCA Victor Division, Radio Corporation of America, Camden, N.J.**

For more details circle #416 on mailing card.

Slide Projector Has New Design

The Revere 444 35 mm Slide Projector has been entirely redesigned. It is horizontal and square in appearance, due to a new optical system. The new method of slide insertion places slides right side up over an illuminated screen, allowing the operator to view them before projection. A special socket automatically positions all slide mounts, regardless of varying thicknesses, permitting inter-



changing of glass, plastic or paper slides.

Other features of the redesigned projector include a side-operated cooling blower and an automatic two-bladed fading device which slowly blacks out the projected image while gradually fading in the next slide. The Revere 444 is built into the base of its attractive carrying case. **Revere Camera Company, 320 E. 21st St., Chicago 16.**

For more details circle #417 on mailing card.

Flat Wall Paint Is Washable and Odorless

An alkyd-type flat wall paint that is mar resistant, washable and durable has been announced. It is easily applied by either brush or roller coater and dries rapidly with no paint odor. The paint, known as Wallhide PBX Flat Wall Paint, is offered in a modern color range, all of which leave a finish that can be washed or scrubbed repeatedly without marring it or fading its color. Finger prints, smears and dirt are easily washed away, leaving a smooth uniform appearance. **Pittsburgh Plate Glass Co., 632 Fort Duquesne Blvd., Pittsburgh 22, Pa.**

For more details circle #418 on mailing card.

Heavy-Duty Oil Burner in Varying Capacities

Model C-1-A oil burner, for firing CS No. 2 or lighter fuel, is available in capacities ranging from four to eight gallons per hour. The new heavy-duty atomizing unit is built around a rugged cast iron fan housing with convenient external adjustments provided for the atomizing nozzle position and position of the air diffuser assembly. Adjustments can be made while the burner is in actual operation, facilitating its setting for maximum combustion efficiency. The burner is equipped with a totally enclosed, permanently lubricated ball bearing motor. It is available for use with either stack switch or electronic controls in draft tube lengths of 9, 16 or 22 inches. **Iron Fireman Manufacturing Co., 3170 W. 106th St., Cleveland 11, Ohio.**

For more details circle #419 on mailing card.

Desk Moving Device Saves Effort and Wear

A new device has been developed to facilitate the moving of seating units in schools and colleges. Known as the Scoot-A-Desk, the unit has an easy cam lever adjustment that fits desks of all makes and moves them with ease and smoothness. It is of all spot-welded steel construction with ball-bearing wheels and semi-pneumatic rubber tires. The fork and lower bumper are rubber covered to prevent marring of desks and the Scoot-A-Desk is constructed to stand up under constant use. It permits quick



and easy moving of desks and seating units for cleaning, for re-arrangement of rooms and for transfer to other rooms or areas. **Spartan School Equipment Co., Hinchman Rd., Baroda, Mich.**

For more details circle #420 on mailing card.

(Continued on page 82)

What's New ...

Physical-Political Globe for Teaching and Reference



A new 24 inch Physical-Political Globe has been introduced for use in classrooms, libraries and offices. It is offered in a variety of stands for floor or table use. Lightness and strength are combined in the molded wood-fiber plastic ball on which the map is printed. The "free-ball" design permits the globe to be turned to any point or lifted from the base for demonstration. It is carefully colored to show land elevations and contains a wealth of political and cultural data. **Denoyer-Geppert Company, 5235 Ravenswood Ave., Chicago 40.**

For more details circle #421 on mailing card.

Stria Acoustical Tile Is Non-Combustible

Many distinctive decorative possibilities in ceiling design can be achieved with the new non-combustible Stria Acoustical Tile. The new tile, while low in cost, has exceptionally high acoustical values and presents multiple striations or grooves. The tile surface has a pleasing appearance which blends with modern or traditional interiors. It reflects more than 75 per cent of light striking it.

Stria Acoustical Tile is a Fiberglas sound control product which is dimensionally stable, fire safe, will not rot, absorb or give off odors, and offers no sustenance to bacteria, termites or vermin. It does not warp, buckle, expand or contract under varying conditions and is easily cleaned with fresh wall paper cleaner or by the vacuum method. It is available in 12 by 12 and 12 by 24 inch sizes and may be spray painted with non-bridging water-base paint without affecting its noise reduction efficiency. **Owens-Corning Fiberglas Corp., Toledo 1, Ohio.**

For more details circle #422 on mailing card.

Provides Weather Protection Aluminum Awning Window

A new Lupton aluminum awning window has been designed especially for construction where horizontal lines are emphasized. It permits greater control of ventilation through open-out, awning-type sash. The windows afford enough protection to be left open even when it

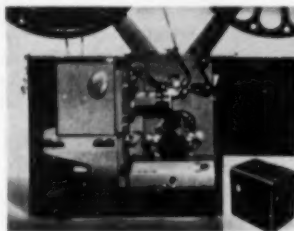
is raining. Another advantage is offered in cleaning. The awning windows can be cleaned on both sides from the inside, simplifying the process and eliminating any danger from outside cleaning. When screens or storm sash are needed they fit on the inside.

A centrally operated control bar delivers equal power to both jambs for easy opening and closing and ensures a tight seal around each sash. The complete vinyl plastic weather stripping on the inside contact of the frame is protected from weather damage. The operating mechanism is completely concealed in the window frame and provides finger-tip control. **Michael Flynn Mfg. Co., 700 E. Godfrey Ave., Philadelphia 24, Pa.**

For more details circle #423 on mailing card.

Simplicity With Efficiency in Victor Projector

Simplicity of design has been combined with efficiency of operation in the new 1954 Victor 16 mm. Sound Projector. It features a new easy three-spot threading system, new softly illuminated finger-tip



control panel, lubricatic oil system, flat field lens for clarity of the entire picture and other improvements. The new styling and engineering are incorporated into all three models: Classmate 4 for small audiences, Assembly 10 for medium-sized audiences and Sovereign 25 for large audiences. **Victor Animatograph Corporation, Davenport, Iowa.**

For more details circle #424 on mailing card.

Adjustable Height Lectern Is Motor-Driven

The problem of adjusting the lectern to speakers of varying heights is easily solved with the new Hi-Lo. The flick of a switch moves the lectern up or down to suit the convenience of the speaker, taking microphone, lamp and other equipment with it. No box is needed for the short speaker to stand on, with the possibility of it tipping. The tall speaker need not stoop to reach the microphone.

The Hi-Lo standard model lectern measures 24 inches across the front, is 20 inches deep and is adjustable in height for a range of eight inches from 38 to 46 inches at the back. The upper portion of the lectern may be removed from the base and placed on a table or desk if desired. **Detroit Lectern Company, 14430 Harbor Rd., Detroit 15, Mich.**

For more details circle #425 on mailing card.

Automatic Equipment for Intercommunication

A dial telephone switchboard is the heart of a newly designed communication system which may be provided in various sizes, depending upon requirements. Model 4A23 Telecom handles up to 23 lines, is completely automatic and can handle four simultaneous conversations. It provides fast, accurate, private communication within an institution.

The completely self-contained switchboard design requires only simple connections for installation. It can be mounted or placed anywhere, is completely dust-tight and operates on 115 volts 60 cycles. In addition to the dial telephone service within the institution, a paging system is provided. A Speaker-Phone may also be used rather than a standard telephone in cases where it would be a convenience not to have to use an ordinary handset.

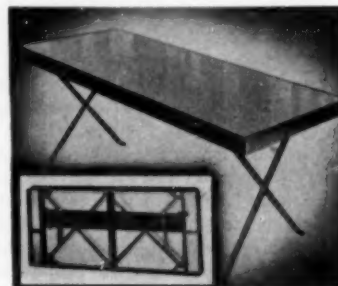
The equipment has been designed to harmonize with standard furniture so that it can be located wherever needed. It has high quality components, carefully assembled for long reliable service. Other models are available offering 10 to 100 lines. **Telecom Inc., 1019 Admiral Blvd., Kansas City 6, Mo.**

For more details circle #426 on mailing card.

All-Steel Design In Tracy Folding Table

All-Steel Uni-Structure design is employed in the new Tracy Folding Table. The table is easy to set up and fold and the top supporting brace-beam folds down to form a positive pedestal lock to give a rigid, stable unit. The table is light in weight, has smooth, all-steel edges, and the one piece steel frame includes the apron and edge. It is cross braced at three points for extra strength and stability.

The table is available in a wide selection of colors in Formica Masonite to meet the trend toward psychological color selection in educational, medical and other institutions. The X-type pedestal permits wide base protection against tipping and the design is modern



in appearance and construction. Tables are available in 6 and 8 foot lengths, 30 inches wide, and in 29 or 24 inch heights. **The Tracy Co., Cedarburg, Wis.**

For more details circle #427 on mailing card.

What's New ...

Unit Ventilator Conditions Air

The Trane Unit Ventilator with Kinetic Barrier Action is a new system designed to overcome the problems presented in classroom heating and ventilating. It combines the advantages of conventional unit ventilators with those of perimeter heating systems to provide a comfortable, healthful atmosphere at all times in the classroom.

Warm air is forced under pressure throughout the length of lateral extensions of the system, as well as from the unit ventilator itself, to bring the room up to a comfortable temperature after being unoccupied. To introduce fresh air after the classroom is occupied, outside air is blended with the room air, filtered free of impurities, heated to the desired temperature and discharged into the room all along the wall. The ventilation air blends with the room air and is carried into every corner of the room. Cool air, when required, is circulated in the same manner, without drafts.

The Kinetic Barrier Action prevents downdrafts at the windows, every minute the unit ventilator is operating. It provides a constant comfortable atmosphere all along the window wall. The Trane Company, La Crosse, Wis.

For more details circle #428 on mailing card.

Door Hardware Designed for Safety

A glass vision panel is used in the new Visiondor hardware which is designed to increase school safety. The panel gives a view of the approach on the opposite side of the door to avoid pushing the door into an approaching teacher or student. It also serves as a push plate, a door pull and a lock. A slow-moving closing device prevents fingers being caught.

Visiondor hardware comprises a Y-shaped pull, cast of brass and chrome plated, machine-screwed into the exterior half of an aluminum frame and a 1/2 inch thick glass push plate which doubles as the viewer. It fits into the interior half of the aluminum framework and is securely held with brass clips. A special mortised cylinder lockset is mounted below the pull. The lockset is operated by



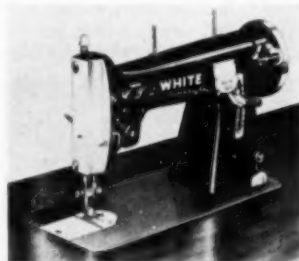
a key from the outside and a thumb-turn from the inside. Hardware Sales Co. Inc., 383 Post Road, Darien, Conn.

For more details circle #429 on mailing card.

Machine Does Plain and Fancy Sewing

Embroidery stitches can be done on the new White All-Stitch Zigzag machine without special attachments. It also does perfect straight stitching and simple, everyday sewing. Model 641, for both single needle and twin-needle sewing, makes monograms, French knots, blind hems, lockstitch or zigzag, over-cast seams, satin stitches and other special stitches in addition to ordinary sewing. In addition, the machine does two-color embroidery. Twin needles perform all the designs of one needle, but in two colors for special effects. The machine can even sew on buttons and make buttonholes without attachments.

Stitch lock prevents any variance once the stitch width is selected. Built-in twin tension eliminates any chance of broken or tangled threads. The white all-speed control is another feature which is especially helpful for beginners who can sew as slowly as desired, yet with full power. The machine is built to rigid specifications, of the finest grade of ma-



terials, and sews quietly and smoothly with a minimum of effort. It is available in a hand-rubbed furniture cabinet to match or complement any decorating scheme. White Sewing Machine Corporation, 11770 Berea Rd., Cleveland 1, Ohio.

For more details circle #430 on mailing card.

Generator Series Powered by Chrysler Engines

A new series of complete, packaged electric power generating plants has been developed, with power supplied by Chrysler industrial engines. Designed to deliver full rated power with maximum efficiency and economy, the new Ready-Power generator series includes 50, 30 and 20 KW ratings. They are designed for either standby or continuous service and can be equipped for fully automatic emergency standby service in schools and colleges. The units are economical in fuel consumption and smooth and quiet in operation. The heavy welded structural steel base assures easy installation and permanent alignment without a special foundation. Controls for both engine and generator are located in a single, simplified control cabinet. Ready-Power Company, 11231 Freud Ave., Detroit 14, Mich.

For more details circle #431 on mailing card.

Waste Receptacle Has Streamlined Design



Modern streamlining has been applied to the Solar-Sturges self-closing waste receptacle line. These efficient units for sanitation and neatness have been redesigned for more attractive appearance. The swinging top still opens instantly, at a touch, to allow waste to be easily deposited, and swings closed gently and silently. They are easy to empty as the top is merely tilted back, permitting easy removal of the inner container for emptying. There is only one moving part, in the swinging top, thus minimizing maintenance.

The new Solar waste receptacles have no sharp corners and can be used to encourage neatness in corridors, toilet rooms and washrooms, locker rooms, cafeterias, laboratories and other areas. They are available in sizes to fit every need. Solar-Sturges Mfg. Div., Pressed Steel Car Co., Inc., Melrose Park, Ill.

For more details circle #432 on mailing card.

Interior Wall Decoration Combines Color and Design

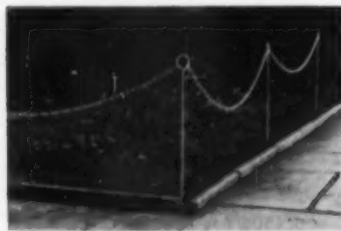
Super Kem-Tone Applikay is a new development in interior decoration. A specially designed twin roller produces an attractive, brocade-like design on painted walls which minimizes smudges and finger marks, making it especially effective for decoration of classrooms, corridors, reception rooms, libraries, student unions, residence halls, cafeterias and lunch rooms. The finish can be readily washed and scrubbed when necessary.

Applikay has an opalescent sheen giving a silk-brocade effect to the finished wall when viewed from various angles. Designs are applied to surfaces first coated with Super Kem-Tone. A fabric covered roller and a plastic roller, on which any of five different designs are embossed, are used for the application. The fabric roller picks up the Applikay from a paint tray and distributes it evenly over the design roller in the process of application. Applikay is available in a variety of attractive colors. The Sherwin-Williams Co., 191 Prospect Ave., N.W., Cleveland 1, Ohio.

For more details circle #433 on mailing card.

What's New...

Decorative Chain Fence for Lawns and Drives



Made of heavy 1½ inch chain links and tubular steel stakes, the Ship's Chain fence is finished in white baked enamel. It provides a sturdy edging for lawns, drives or walks, to protect plantings and grass, outline parking areas, and provide a decorative trim.

The new fence is offered in "pre-fab" packages containing four 6 foot sections of chain, five 3 foot seamless tubular steel stakes, and 8 S-hooks to attach chain to stake loops. It can be erected quickly and easily by simply driving the stakes into the ground to the desired depth. A decorative scalloped effect is obtained by locating the stakes at intervals less than six feet. The fence does not interfere with grass cutting or trimming as mowers can be run under it. The fence can be opened at any stake for moving implements by raising one of the S-hooks. **The Warren Products Company, 1836 Euclid Ave., Cleveland 15, Ohio.**

For more details circle #434 on mailing card.

Direct Control for Unit Ventilators

A new Unit Ventilator Control System has been introduced to prevent the possibility of over-heated classrooms, and to ensure comfort and fuel economy. A feature of the new system is the Limitem low-limit airstream thermostat. It is a precision instrument engineered to provide control for unit ventilator discharge temperatures. Limitem has a calibrated temperature adjustment dial with range of 20 to 185 degrees Fahrenheit.

Powers Packless Control Valves are standard for unit ventilators and convectors. Their design and construction eliminate packing maintenance, reduce valve stem friction and give smooth control. The Powerstroke Damper Operator, with hesitation spring, gives smooth gradual operation of unit ventilator dampers. The new system is designed to give accurate control with minimum maintenance. **The Powers Regulator Co., Skokie, Ill.**

For more details circle #435 on mailing card.

Steel Chalkboard Has Fine Writing Surface

The durable surface of Austral-Steel Chalkboards is vitreous porcelain fired on 18 gauge enameling steel. It resists

chipping, scratching, denting and abrasion and is offered with a long-time guarantee by the manufacturer. The excellent writing surface takes a fine chalk mark and erases easily. The pleasing green color blends with modern classroom decorations.

Magnets can be used on the porcelain-steel surface of the new chalkboards, permitting the board to serve for bulletins and as an aid in visual instruction. The board is available with various types of backing, such as a waterproofed, sound-deadening felt backing and a fiber board backing with a waterproof coating on the reverse side. The board can be washed freely, does not warp, break or shatter and is extremely durable. **Austral Products Corporation, 225 Broadway, New York 7.**

For more details circle #436 on mailing card.

Reading Rate Aided by Accelerator

The new AVR Rateometer is a sturdy reading accelerator designed to increase reading rate and comprehension simultaneously. It noiselessly guides a reader at any selected rate in words per minute. The unit is portable, weighing less than



three pounds, and requires no special holders or guides for use with pages, magazines or books.

The built-in direct-reading rate calculator is simple enough for even a child to use. There is a simple push-pull adjustment for book thickness, on-off light and switch on top for convenience, and the Rateometer offers electric clock accuracy of rate control. It is designed for individual and classroom use, for elementary, junior and senior high school, college and adult training. **Audio-Visual Research, 531 S. Plymouth Ct., Chicago 5.**

For more details circle #437 on mailing card.

Identification Labels for Tape Recordings

A new pressure-sensitive labeling tape is offered for identification of tape recordings. Called "Scotch" write-on tape No. 48, it offers a continuous roll of 40 printed labels that stick to the reels at a touch. They can be written on with pen, pencil or typewriter and are printed so that only the reel number, the date and the subject need be filled in. The labeling tape comes in a convenient metal dispenser. **Minnesota Mining & Mfg. Co., 900 Fauquier St., St. Paul 6, Minn.**

For more details circle #438 on mailing card.

Weed Killer Is Safe and Effective

Dolge N P Weed Killer is a new type product which kills on contact. It comes as a readily soluble powder requiring no agitation to keep it in suspension. The product is non-selective, for use where no growth is wanted. It kills on contact and also acts by translocation to finish roots. Heavy doses sterilize soil so seeds cannot sprout. Sprayed, sprinkled or used as a dry powder, N P Weed Killer is non-inflammable, non-volatile, non-corrosive and quick acting. **The C. B. Dolge Company, Westport, Conn.**

For more details circle #439 on mailing card.

Steel Folding Chair Is Tip-Proof

A new improved all-steel folding chair has been developed which does not tip. Months of design, experimentation and testing have gone into the development of the new folding chair which is so designed that it does not tip, even when a man stands on it. Vircolite, the seven-ply core, patented plastic process, is used in the manufacture of the sturdy chair, the finish of which does not stain. The curved seat and back make the chair comfortable for sitting and legs have protective tips to prevent damaging floors. **The Virco Mfg. Corp., 15134 S. Vermont, Gardena, Calif.**

For more details circle #440 on mailing card.

Roll-Out Bleacher Saves Space

A new development in space saving seating for gymnasiums and other areas requiring special seating is offered in the Hussey Roll-Out Stand. The result of years of research, the stand rolls in and out from the wall and can be easily operated by one person. It is designed to meet all safety requirements, is engineered against side sway, and has risers of the "box girder" type of construction.

The stand has a fully enclosed deck which prevents collection of waste underneath and also gives a sense of safety to spectators. It is designed to provide adequate seating capacity with reduced construction costs in new buildings, as well as to provide needed seating capacity with a minimum loss of floor space in



present buildings. It operates on oversized composition, easy rolling casters which do not mar the floor. **Hussey Mfg. Co., Inc., No. Berwick, Maine.**

For more details circle #441 on mailing card.

What's New ...

Self-Shielded Mechanism in Miniature Instruments

Designed for use in laboratories and in educational work, the new line of Miniature Portable D-C Instruments incorporates a self-shielded mechanism. They employ the Weston Core Magnet which provides effective shielding, permitting close proximity to magnetic materials without affecting their accuracy. Known as Model 281, the miniature portable instruments are furnished in complete bakelite cases, in a wide variety of ranges. **Weston Electrical Instrument Corp., 614 Frelinghuysen Ave., Newark 5, N.J.**

For more details circle #442 on mailing card.

Mattress Pad Is Comfortable and Practical

A seamless, one piece mattress pad that is soft and comfortable is offered in the new Bates Colonial. Made of fully bleached new white cotton, the pad has no filling or cross stitching to pull out. It clings to the mattress and holds the sheet, is light in weight and not bulky. Bias bound on all four sides, the mattress pad is easy to handle, launders and dries easily, takes a minimum of storage space and does not shrink in width. It can be washed in water of any temperature and is serviceable and economical. The pads are available in sizes 17 by 18 inches, 26 by 34 inches, 38 by 72 inches, 38 by 76 inches, and 52 by 76 inches. **Bates Fabrics, Inc., 80 Worth St., New York 13.**

For more details circle #443 on mailing card.

Mopping Tank Has Improved Construction

Several improvements in the White Mopping Tank have resulted in a completely streamlined model with long life. The chassis is all steel welded construction. The plate type, ball bearing wheels are cadmium plated and mounted under the center of the load for easier maneuverability and added strength. The self-cleaning water draw-offs are of solid bronze construction and do not drip or leak. The two compartments have a perforated plate in the bottom to catch



the dirt. The truck is solidly constructed for long use and all parts are designed for efficient, easy operation. **White Mop Wringer Co., Fultonville, N.Y.**

For more details circle #444 on mailing card.

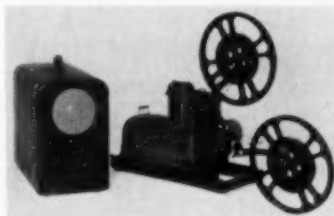
Multicolored Walls From One Spray Coat of Paint

A new interior decorative wall enamel has been introduced which is multicolored. Two or more colors can be applied simultaneously in a single spray coat that has a finish sufficiently hard to resist abrasion and scratching and which can be scrubbed time and time again without deterioration. Known as Plexitone, the finish is applied with standard spray equipment. The multiple colors exist separately within the Plexitone finish and do not merge or blend upon being sprayed but create an interlacing color network.

Plexitone is manufactured in a number of solid colors which are usually intermixed at the factory to form the multicolors. They may be intermixed as desired by the user since no special equipment is required. Plexitone air dries so it is dry to the touch in one to two hours and is completely dry in four or five hours. **Maas & Waldstein Co., 2121 McCarter Highway, Newark 4, N.J.**

For more details circle #445 on mailing card.

Transistor Projector in Single Case



Primarily designed to play back film with magnetic sound tracks recorded by the film user, the 477-R Projector has a built-in transistor, making possible a single-case unit. The transistor gives full sound-range amplification and is a shockproof, heatless semi-conductor. Use of the transistor makes possible the development of the new optical-magnetic playback projector in an easily-handled, single-piece design. The recording equipment of the magnetic projector has been eliminated for the playback unit, making possible wider use, at lower cost, of magnetic film recording. With the new machine specialized, large-scale audio-visual programs are simplified. The projector operates at both sound and silent speeds, with optical or magnetic sound tracks.

Other features of the 477-R include a still picture button to permit stopping picture action for analysis or discussion, and a film reversing switch to back up film movement without stopping the projector. The unit is easily and quickly set up, film threading is simple and an automatic safety shutter prevents film damage. **Ampro Corporation, 2835 N. Western Ave., Chicago 18.**

For more details circle #446 on mailing card.

Seating Space Increased With Half Round Table



A new folding table has been introduced in a half round shape. It was designed to provide increased seating capacity in minimum space and with comfort. The table has a 3/4 inch hot lacquered fir top, is 29 1/2 inches high and has a diameter of 60 inches. The Du Honey 20 Lock automatically locks the legs into rigid position for strength and stability. **Midwest Folding Products, Roselle, Ill.**

For more details circle #447 on mailing card.

Aluminum Diving Board Meets All Qualifications

Designed to meet all requirements of A.A.U., N.C.A.A. and F.I.N.A. championship competition, the Lifetime Aluminum Diving Board is strong enough to stand up under the most adverse conditions. It is firm, yet light at the tip with maximum springing qualities. The board is built to withstand everyday rugged use for years of service.

The Lifetime Board is attractive in appearance with graceful lines and bright aluminum finish which does not tarnish. The special non-skid tread eliminates the need for matting or other cover. An added safety factor is provided because of the aircraft design. Its light weight makes it easy to install and take down for storage. **James A. Patterson, 16 E. Broad St., Columbus 15, Ohio.**

For more details circle #448 on mailing card.

Large Area Sweeper Removes Dust From Air

The new Turbo-Sweep is a powered floor or pavement sweeper which removes dust from the air at a high rate. Heavy-duty fiber brushes whisk debris into a collecting hopper while the turbine principle employed sucks dust from the air. The hopper is quickly removed for emptying and the dust-collecting bag is sufficiently large to require emptying only infrequently.

The sweeper is easily maneuvered even in obstructed areas, due to the properly placed casters, heavy duty rubber tires and long-life ball-bearing wheels. It is effective for use in cleaning gymnasiums after games, playing fields and parking lots. It is self-propelled and a Maxim silencer reduces noise. **Parker Sweeper Co., 100 Bechtel Ave., Springfield, Ohio.**

For more details circle #449 on mailing card.

PRODUCT INFORMATION

Index to Products Advertised

Page and Key		Page and Key	
All-Steel Equipment, Inc.		Foster Brothers Mfg. Company	
School Furniture	67	Dormitory Bunk Beds.....	62
Altoona Concrete Products Company		Hillyard Chemical Company	
Park Bench	70c	Floor Maintenance	57
Arlington Seating Company		Horner Woolen Mills Company	
School Seating.....	56	Blankets	77a
Barreled Sunlight Paint Company		Huntington Chair Corporation	
Paints	61	Institutional Furniture	72
Bay West Paper Company		Johns-Manville	
Paper Towel Dispenser.....	68	Floor Tile	10
Beier & Company		Johnson Service Company	
Sanitary Napkin Disposal.....	77d	Temperature Control	Cover 4
Blickman, Inc., S.		Keyes Fibre Sales Corporation	
Food Service Equipment.....	5	Paper Tableware	78
Bolte Corporation		Klenzade Products, Inc.	
Laminated Trays	Cover 3	Detergent	72c
Brunswick-Balke-Collender Company		Knoll Associates, Inc.	
Institutional Furniture	12, 13	Institutional Furniture	58
Burroughs Corporation		Maas-Rowe Carillons	
Accounting Machines	53	Carillon Bells	70b
Campus Chefs, Inc.		Maxim Silencer Company	
Food Service Program.....	54	Snow Throwers	75c
Carrom Industries, Inc.		Medart Products, Inc., Fred	
Institutional Furniture	7	Gym Seats	55
Clarín Mfg. Company		Michaels Art Bronze Company, Inc.	
Tablet Arm Chair.....	80	Exhibit Cases	64
Clarke Sanding Machine Company		Minneapolis-Honeywell Regulator Co.	
Floor Maintenance	15	Temperature Controls	8, 9
Colson Corporation		National Electrical Manufacturers Assn.	
Dish & Tray Trucks	60	Electric Range	59
Crane Company		National Vulcanized Fibre Company	
Plumbing Fixtures	16	Wastebaskets	75b
Dodge Company, C. B.		Nationwide Food Service, Inc.	
Floor Maintenance	77b	Food Service Consultants.....	14b
Don & Company, Edward		New Castle Products, Inc.	
Institutional Equipment	71d	Folding Doors	14a
Eichenlaubs			
Institutional Furniture	75a		
		Osborn Engineering Company	
		Engineering Consulto	
		Peabody Seating Company	
		Tablet Arm Chair.....	
		Powers Regulator Company	
		Temperature Control	
		St. Charles Mfg. Company	
		Homemaking Classro	
		Equipment	
		Sexton & Company, John	
		Institutional Food	
		Simmons Company	
		Institutional Furniture	
		Sloan Valve Company	
		Shower Head	
		Spencer Turbine Company	
		Floor Maintenance	
		Sunroc Refrigerator Company	
		Milk Dispenser	
		Telecoin Corporation	
		Laundry Unit	
		Thonet Industries, Inc.	
		School Furniture	
		Tuition Plan	
		Tuition Plan	
		Turk Mfg. Company, Joseph	
		Institutional Furniture	
		Vestal, Inc.	
		Floor Maintenance	
		Vogel-Peterson Company	
		Coat & Hat Racks.....	
		Vonnegut Hardware Co., von	
		Division	
		Fire & Panic Exit Dev	
		Wakefield Brass Company, F.	
		School Lighting	
		Wayne Iron Works	
		Gymnasium Seating	
		Weston Electrical Instrument	
		Electric Instruments	

ION

sed

TO REQUEST PRODUCT INFORMATION

FOLD THIS FLAP OUT

AND USE THESE CARDS

(We pay the postage)



The two cards below are detachable and are addressed to us. With this flap folded out you can turn through the magazine for the items on which you want further information.



When, in either an advertisement or "What's New" you locate the product, turn to the index to advertisements (left) or to the index of "What's New" items on the following page where you will find the key number for the item. Items advertised are listed alphabetically by manufacturer. "What's New" items are in Key Number order. Circle the corresponding key number on the card below for each item in which you are interested. The second card is for the use of someone else who may also want product data.



Detach and mail—no postage required.

Page and Key

Engineering Company	
Engineering Consultants	66c
Engineering Company	
Arm Chair	77c
Engineering Company	
Temperature Control Valves	2
Engineering Company	
Training Classroom	
Equipment	63
Engineering Company, John	
Industrial Food	51
Engineering Company	
Industrial Furniture	65
Engineering Company	
Head	1
Engineering Company	
Maintenance	69b
Engineering Company	
Dispenser	70a
Engineering Company	
Unit	71a
Engineering Company, Inc.	
Furniture	79b
Engineering Company	
Plan	66a
Engineering Company, Joseph	
Industrial Furniture	76
Engineering Company	
Maintenance	74
Engineering Company	
Hat Racks	71c
Engineering Company, von Duprin	
Panic Exit Devices	73
Engineering Company, F. W.	
Lighting	Cover 2
Engineering Company	
Seating	11
Engineering Company	
Instrument Corp.	
Electronic Instruments	69a

June, 1954

Please ask the manufacturers, indicated by the numbers I have circled, to send further literature and information provided there is no charge or obligation.

WHAT'S NEW								ADVERTISEMENTS											
415	416	417	418	419	420	421	422	1	2	5	7	8, 9	10	11	12, 13				
423	424	425	426	427	428	429	430	14a	14b	15	16	31	33	34	35				
431	432	433	434	435	436	437	438	56	57	58	59	60	61	62	63				
439	440	441	442	443	444	445	446	64	65	66a	66b	67	68	69a	69b				
447	448	449	450	451	452	453	454	70a	70b	70c	71a	71b	71c	71d	72	73			
455	456	457	458	459	460	461	462	74	75a	75b	75c	76	77a	77b	77c				
463	464	465	466	467	468	469	470	77d	78	79a	79b		80						
								Cov 2	Cov 3	Cov 4									

NAME	TITLE
INSTITUTION	
ADDRESS	CITY
ZONE	STATE

June, 1954

Please ask the manufacturers, indicated by the numbers I have circled, to send further literature and information provided there is no charge or obligation.

WHAT'S NEW								ADVERTISEMENTS											
415	416	417	418	419	420	421	422	1	2	5	7	8, 9	10	11	12, 13				
423	424	425	426	427	428	429	430	14a	14b	15	16	31	33	34	35				
431	432	433	434	435	436	437	438	56	57	58	59	60	61	62	63				
439	440	441	442	443	444	445	446	64	65	66a	66b	67	68	69a	69b				
447	448	449	450	451	452	453	454	70a	70b	70c	71a	71b	71c	71d	72	73			
455	456	457	458	459	460	461	462	74	75a	75b	75c	76	77a	77b	77c				
463	464	465	466	467	468	469	470	77d	78	79a	79b		80						
								Cov 2	Cov 3	Cov 4									

NAME	TITLE
INSTITUTION	
ADDRESS	CITY
ZONE	STATE

TO REQUEST PRODUCT INFORMATION FOLD THIS FLAP OUT AND USE THESE CARDS

(We pay the postage)



The two cards below are detachable and are addressed to us. With this flap folded out you can turn through the magazine for the items on which you want further information.



When, in either an advertisement or "What's New" you locate the product, turn to the index to advertisements on the preceding page or to the index of "What's New" items (right) where you will find the key number for the item. Items advertised are listed alphabetically by manufacturer. "What's New" items are in Key Number order. Circle the corresponding key number on the card below for each item in which you are interested. The second card is for the use of someone else who may also want product data.



Detach and mail — no postage required.



Key

- 415 School Bus
White Motor
- 416 Portable Sound
Radio Corpor
- 417 Slide Projector
Revere Came
- 418 Alkyd-Type Paint
Pittsburgh Pl
- 419 Oil Burner
Iron Fireman
- 420 Scoot-A-Desk
Spartan Sche
- 421 Physical-Political
Denoyer-Gep
- 422 Stria Acoustical
Owens-Carni
- 423 Aluminum Awn
Michael Flym
- 424 Sound Projector
Victor Anim
- 425 Adjustable Height
Detroit Lect
- 426 Intercommunication
Telecom, Inc
- 427 Folding Table
The Tracy C
- 428 Unit Ventilator
The Trane C
- 429 Visiondor Hard
Hardware S
- 430 All-Stitch Mach
White Sewin
- 431 Generator Series
Ready-Powe
- 432 Redesigned W
Solar-Sturge

FIRST CLASS
CHICAGO, ILL.
PERMIT NO. 136
SEC. 34.9 P. L. & R.

BUSINESS REPLY CARD

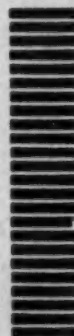
No Postage Stamp Necessary if mailed in the United States

3 CENT POSTAGE WILL BE PAID BY

COLLEGE AND UNIVERSITY BUSINESS

919 NORTH MICHIGAN AVENUE

CHICAGO 11, ILLINOIS



FIRST CLASS
CHICAGO, ILL.
PERMIT NO. 136
SEC. 34.9 P. L. & R.

BUSINESS REPLY CARD

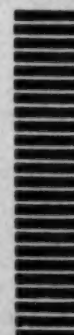
No Postage Stamp Necessary if mailed in the United States

3 CENT POSTAGE WILL BE PAID BY

COLLEGE AND UNIVERSITY BUSINESS

919 NORTH MICHIGAN AVENUE

CHICAGO 11, ILLINOIS



Index to "What's New"

Pages 81-86

Key	Key	Key
chool Bus White Motor Company	433 Super Kem-Tone Applikay The Sherwin-Williams Co.	451 Bulletin No. 210 The Standard Electric Time Co.
Portable Sound System Radio Corporation of America	434 Ship's Chain Fence The Warren Products Co.	452 "Area Illumination" Smithcraft Lighting Division
Slide Projector Revere Camera Company	435 Unit Ventilator Control System The Powers Regulator Company	453 "Mulch-Vac Vacuum Sweeper" The Atwater-Strong Co.
Alkyd-Type Paint Pittsburgh Plate Glass Co.	436 Steel Chalkboards Austral Products Corporation	454 "Fire Alarm Box System" The Gamewell Company
Oil Burner Iron Fireman Manufacturing Co.	437 AVR Rateometer Audio-Visual Research	455 "Kewanee-Petro Boiler-Burner" Kewanee Ross Corporation
Scout-A-Desk Spartan School Equipment Co.	438 Write-On Tape Minnesota Mining & Mfg. Co.	456 "How to Cut Book Maintenance Costs" Delkote, Inc.
Physical-Political Globe Denoyer-Geppert Company	439 Weed Killer C. B. Dolge Company	457 Multi-Clean Flare Multi-Clean Products, Inc.
Stria Acoustical Tile Owens-Corning Fiberglas Corp.	440 Tipproof Folding Chair The Virco Mfg. Corp.	458 "7700" Hinge The Sanymetal Products Co., Inc.
Aluminum Awning Window Michael Flynn Manufacturing Co.	441 Roll-Out Bleacher Hussey Mfg. Company	459 Soap Dispensers, Valves & Tanks Bobrick Manufacturing Corp.
Sound Projector Victor Animatograph Corp.	442 Miniature Portable Instruments Weston Electrical Instrument Corp.	460 "Color Comes of Age" Martin-Senour Co.
Adjustable Height Lectern Detroit Lectern Company	443 Mattress Pad Bates Fabrics, Inc.	461 Vinyl Floor Tile Vinyl Plastics Inc.
Intercommunication Equipment Telecom, Inc.	444 Mopping Tank White Map Wringer Co.	462 "Facts About Positions in IBM" International Business Machines Corp.
Folding Table The Tracy Company	445 Plexitone Wall Enamel Maas & Waldstein Co.	463 "How to Care for Your Floors" S. C. Johnson & Sons, Inc.
Unit Ventilator The Trane Company	446 Transistor Projector Ampro Corporation	464 "Planning a Dishwashing System" Universal Dishwashing Machinery Co.
Visionador Hardware Hardware Sales Co., Inc.	447 Half Round Folding Table Midwest Folding Products	465 Recreation Equipment The Recreation Equipment Corp.
All-Stitch Machine White Sewing Machine Co.	448 Aluminum Diving Board James A. Patterson	466 "How to Use Your FencePainter" Fence Painter Corp.
Generator Series Ready-Power Company	449 Turbo-Sweep Parker Sweeper Company	467 Lab Planning Kit Labline Inc.
Redesigned Waste Receptacle Solar-Sturges Manufacturing Div.	450 "Hydrotherm Bulletin No. 100" American Hydrotherm Corporation	

Product Literature

• The advantages of high temperature water over steam are presented in a new 16 page booklet entitled, "Hydrotherm Bulletin No. 100," issued by American Hydrotherm Corp., 33-70 12th St., Long Island City 6, New York. The text discusses and illustrates the applications of high temperature high pressure water in distributing heat to large area installations such as schools, colleges, hospitals and other institutions.

For more details circle #450 on mailing card.

• Architectural data on Electric Clock and Program Systems and Fire Alarm Systems for Schools is given in a new Bulletin No. 210 recently released by The Standard Electric Time Co., 89 Logan St., Springfield 2, Mass. The bulletin gives complete details on the systems, discussing the installations, specifications, and operation of each.

For more details circle #451 on mailing card.

• Condensed but complete information on Smithcraft "Area Illumination" is given in a new 8 page catalog recently released by Smithcraft Lighting Division, 233 Everett Ave., Chelsea 50, Mass. The catalog is profusely illustrated with photographs and drawings and presents a "cross-index" of fluorescent lighting.

For more details circle #452 on mailing card.

• A machine designed to save time and money in the handling of leaves, paper, grass, snow and other types of refuse is described in a folder on the "Mulch-Vac Heavy Duty Vacuum Sweeper." Various models of the equipment, available from Atwater-Strong Co., Atwater, Ohio, for outdoor use in the maintenance of lawns, sidewalks, parking areas, playing fields and other areas, are pictured. Full descriptive text tells how the machine operates and economies effected in its use.

For more details circle #453 on mailing card.

• The operation and advantages of a Municipal Fire Alarm Box System are discussed in a new 24 page booklet published by The Gamewell Company, Newton Upper Falls 64, Mass. The information should be of interest to administrators as well as to all citizens who are interested in fire protection.

For more details circle #454 on mailing card.

• The Kewanee-Petro Boiler-Burner Catalog 502 tells the story of a unit which has been produced by Kewanee-Ross Corp., Kewanee, Ill., for either gas, oil, or oil and gas firing, for high or low pressure operation. Descriptive information on the boiler, which with supplemental equipment is all mounted on skids and assembled for the attachment of the firing equipment, is given in the catalog which also carries detailed information on the firing equipment and its assembling. Cut-away color photographs, charts and regular product photographs illustrate the descriptive text.

For more details circle #455 on mailing card.

• "How to Cut Book Maintenance Costs With Book-Saver" is the title of a leaflet issued by Delkote, Inc., 1419 Faulk Rd., Wilmington 99, Del. The leaflet shows, in text and illustrations, how to bind magazines, repair damaged bindings on books, and make books with the liquid plastic known as Delkote Book-Saver.

For more details circle #456 on mailing card.

• A new cardboard device called the Florule has just been brought out by Multi-Clean Products, Inc. 2277 Ford Pkwy., St. Paul 1, Minn. Described as "a guide to better floor finishing," the Florule gives information on how to treat various types of floors. The 4 by 6 inch card has a rotating dial which, when pointed to the name of a type of flooring, discloses the proper floor materials to use, coverage per gallon, drying time and method of application.

For more details circle #457 on mailing card.

• Engineering information and architectural specifications on the new "7700" Hinge for Toilet Compartment Doors are given in a new brochure released by Sanymetal Products Co., Inc., 1677 Urbana Rd., Cleveland 12, Ohio. Cut-away drawings and photographs illustrate dramatically how the hinge operates and the ease with which doors equipped with it can be opened. Described as "A Major Improvement in Door Operation and Control," the hinge reduces friction to the barest minimum, resulting in perfect control and a door that opens with the slightest pressure. Full data on a dependability performance test conducted by an independent research laboratory are included in the brochure.

For more details circle #458 on mailing card.

• A new multi-colored Catalog of Soap Dispensers, Valves and Tanks has been issued by Bobrick Manufacturing Corporation, 1214 Nostrand Ave., Brooklyn 25, N.Y. The catalog is divided into sections for easy reference and includes information on capacity, dimensions and individual features of each model.

For more details circle #459 on mailing card.

• How color can be used to influence emotions, moods, work habits and even appetites is the subject of a filmstrip developed by Martin-Senour Company, 2520 Quarry St., Chicago 8. Entitled "Color Comes of Age," the 45 minute film gives the recorded views of twelve color authorities and traces the history and use of color from the earliest civilization to the present.

For more details circle #460 on mailing card.

• Full color is used to illustrate the line of "Caribbean Colors" in Vinylast Plastic Floor Tile in a new catalog issued by Vinyl Plastics, Inc., P. O. Box 451, Sheboygan, Wis. Characteristics of the tile and other data are carefully covered and the text is illustrated with photographs of installations.

For more details circle #461 on mailing card.

• "Facts About Positions in IBM" is the title of a new booklet giving complete information on the career opportunities in International Business Machines Corp., 590 Madison Avenue, New York 22. The booklet is divided into six sections, each section outlining the qualifications, responsibilities, and conditions of employment for the work discussed. Information about the company's products and services, locations, employee benefits and educational opportunities are also covered briefly.

For more details circle #462 on mailing card.

• "How to Care for Your Floors" is the subject of a new booklet, giving "How to" suggestions for floor care, brought out by S. C. Johnson & Son, Inc., Racine, Wis. The material tells how to finish all types of floors, how to cure sick floors, how to make floors safer to walk on, how to choose the right products for floors and tips on day-by-day maintenance.

For more details circle #463 on mailing card.

• "Planning A Dishwashing System" is the title of a leaflet released by Universal Dishwashing Machinery Co., 35 Windsor Place, Nutley 10, New Jersey. The story gives detailed information on the advantages and disadvantages of having a dishwashing system and lists the five types of dishwashing machines from which the most suitable in size and type of operation may be selected.

For more details circle #464 on mailing card.

• A new 48 page Catalog No. 19 of Recreation Equipment is now available from The Recreation Equipment Corp., Anderson, Ind. The catalog gives complete descriptive information on playground equipment, basketball and swimming pool equipment and bicycle racks. Each item in the line is illustrated and there are photographs of actual use of the various types of recreational equipment.

For more details circle #465 on mailing card.

• "How to Use Your FencePainter" is the title of a booklet issued by Fence Painter Corporation, 2314 W. Van Buren St., Chicago 12. Photographs and text tell the story of the FencePainter, how it is used, the results obtained and the advantages of this fast, inexpensive and effective method of painting not only wire, iron, wood, stone and brick fences, but many other outdoor surfaces.

For more details circle #466 on mailing card.

• A new application of three-dimensional technic is now available for the efficient planning of new laboratories or additions to existing facilities. Labline's 3-D Lab Planning Kit consists of 26 accurately scaled three-dimensional models which correspond to those of the full sized sectional metal furniture described in the catalog which comes with the kit. Ruled layout sheets are also included. The kit is available from Labline, Inc., 217 N. Desplaines, Chicago 6.

For more details circle #467 on mailing card.



only Bolta *gives you* COLOR-and-PATTERN HARMONY in LAMINATED TRAYS

Also Famous Boltalite Hard Rubber Trays
in Sizes 12 x 16 and 14 x 18
Also Boltabilt Trays in Round, Oblong and
Oval Shapes in 15 Different Sizes

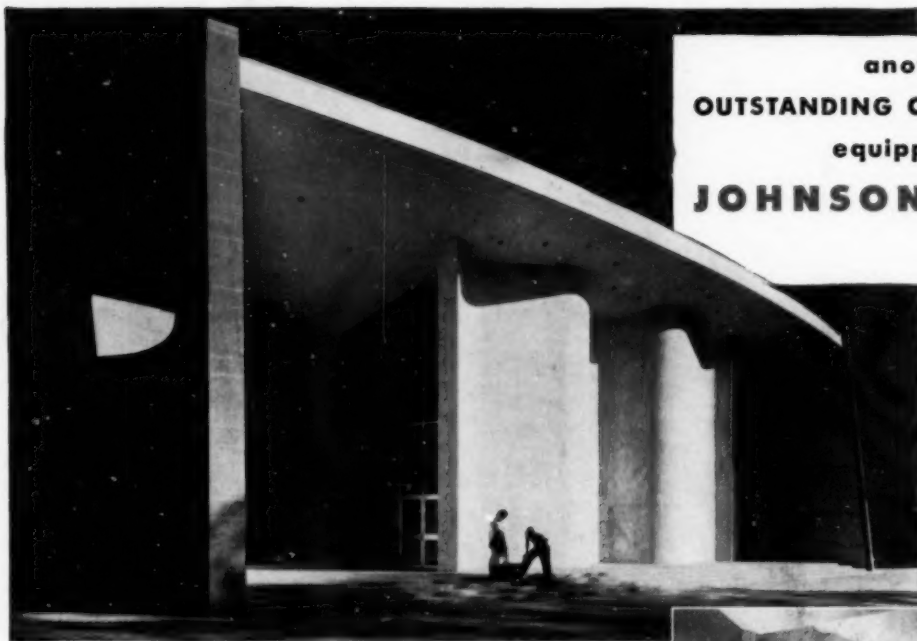
Watch young appetites perk up when meals are served on BOLTA COLOR TRAYS. BOLTA COLOR TRAYS give zest to children's appetites, add warmth and cheer to cafeteria decor. Your school, too, can serve meals the BOLTA COLOR-WAY . . . from a choice of 36 sparkling, color-and-pattern combinations . . . BOLTA TRAYS last longer because they're stronger — they're LAMINATED! Laminated of seventeen — yes, seventeen separate layers to give up-to-ten-times greater strength — to give from two-to-six years longer wear. Because BOLTA gives you longer-life-per-tray for pennies more per tray, BOLTA COLOR TRAYS cost you less in the long run — much less.

*Only BOLTA gives you such outstanding durability
in patterns and colors.*

- Non-porous, satin-smooth surfaces
- Impervious to cigarette burns, food acids, alcohol, fruit juices
- Lightweight, noiseless, easy to handle
- Washable in mechanical dishwashers
- Will not warp, split or stain
- 8 x 10, 10 x 14, 12 x 16, 14 x 18, 15 x 20

The **BOLTA** Company
LAWRENCE
MASSACHUSETTS

Planning to Re-decorate? Specify BOLTAFLEX for booths and furniture, BOLTA-WALL for interiors



another
OUTSTANDING COLLEGE BUILDING
equipped with
JOHNSON CONTROL



T-800
Remote Bulb
Thermostat



T-901 Submaster
Thermostat



D-251
Piston Damper
Operator



V-103
Coil Valve

Hall Memorial Auditorium, Oberlin College, Oberlin, Ohio. Harrison and Abramovitz, architects, New York, N. Y.; Jaros, Baum and Bolles, mechanical engineers, New York, N. Y.; T. O. Murphy Co., heating and ventilating contractors, Oberlin, Ohio.

Like so many college buildings across the nation, Hall Memorial Auditorium, on the Oberlin college campus, has among its many desirable features, a Johnson System of Automatic Temperature Control. Acting as the "brain" of the heating system, "Planned-for-the-Purpose" Johnson Control automatically maintains just-right temperatures, whether the building is filled to capacity or only partly occupied.

Efficient control, to meet the special needs of this modern building, is accomplished simply and with great economy. Johnson *Individual Room Thermostats* control valves on convectors and provide *proper sequence* control of unit ventilator cabinets. In addition, other Johnson Thermostats operate Johnson Valves and Damper Operators on central fan heating and ventilating systems.

How about the buildings on your campus? No matter what type of installation you are planning—convectors or radiators for dormitories and living quarters, combination convectors and central fan ventilation, "straight blast" heating, or complete air conditioning for classroom and administration buildings—Johnson Control will provide the greatest comfort at the lowest possible operating cost.

Johnson Control Systems are *not* limited to new buildings. They may be installed in existing buildings regardless of the type of heating and ventilating system employed. Ask an engineer from a nearby Johnson branch office for recommendations on your control problems soon. There is no obligation. JOHNSON SERVICE COMPANY, Milwaukee 2, Wisconsin. Direct Branch Offices in Principal Cities.

JOHNSON CONTROL

TEMPERATURE  AIR CONDITIONING

MANUFACTURING • PLANNING • INSTALLING • SINCE 1885